STACKS

79—1

Missouri Medicine

Vol. 79, No. 1 (ISSN 0026-6620) January, 1982

Chest Case of the Month

Unusual Cavitary Paratrachael Mass

Preliminary Program

124th ANNUAL SESSION

Hypomagnesemia

IMPORTANT!

Report of MSMA Committee on Constitution and Bylaws

(A-82)

Acoustic Tumors: Surgical Results in 24 Consecutive Operations

Missouri State Medical Association

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FEB 15 1982

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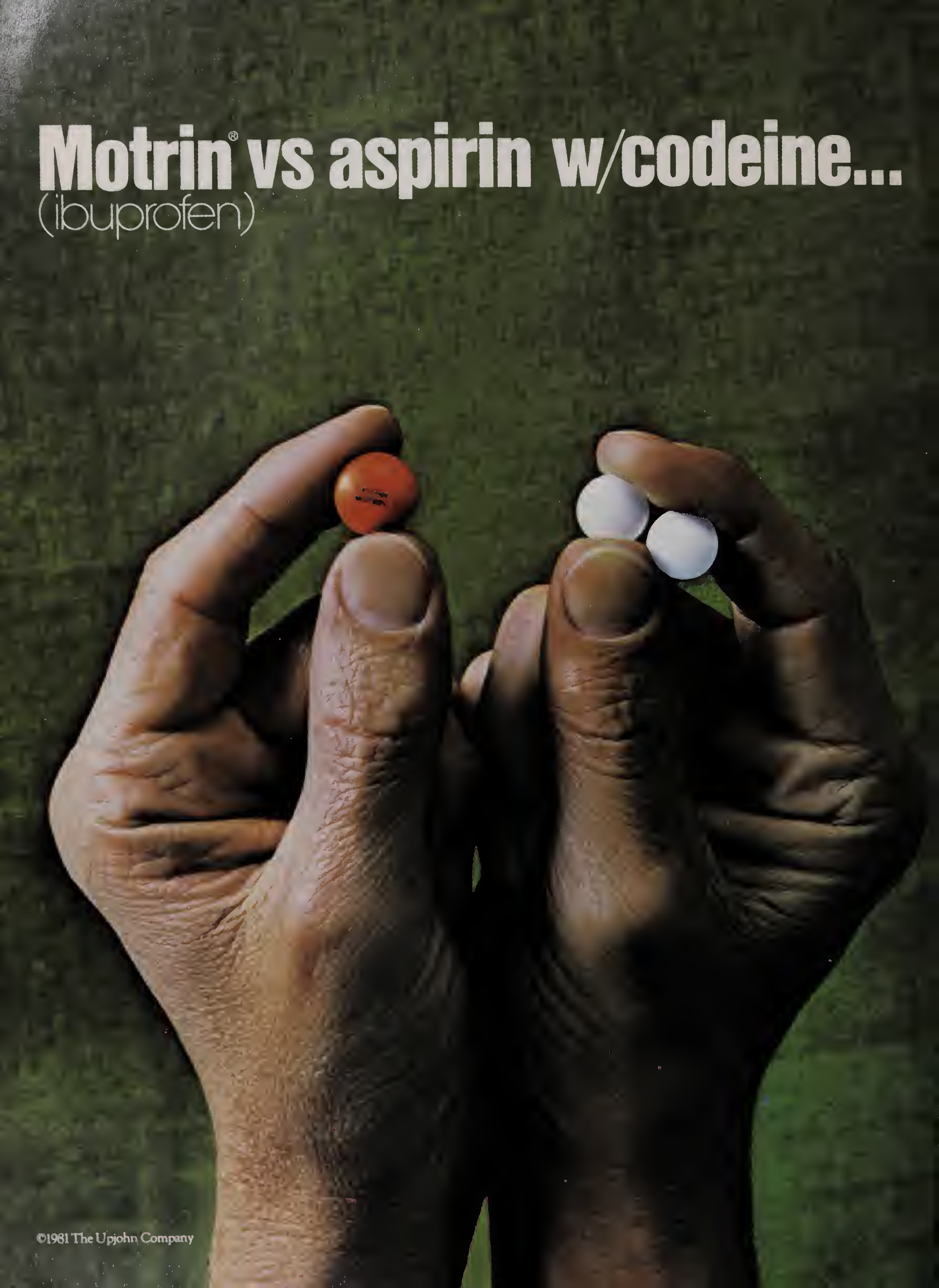
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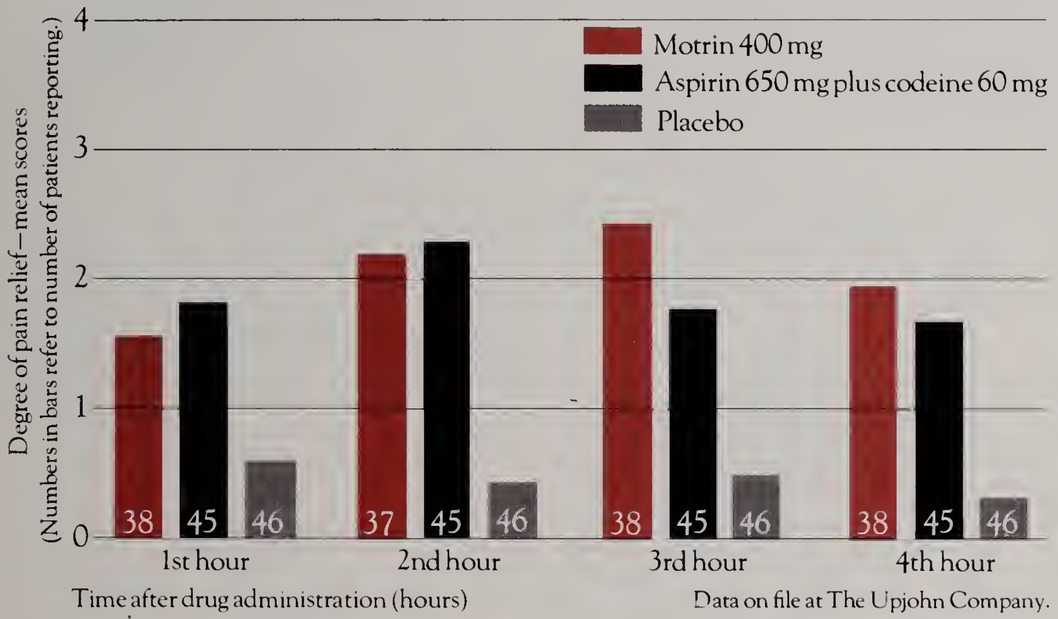

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References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints (black and white) or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

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NEWS ROUND-UP

January, 1982

MSMA Council approves 1982 budget

An $844,935 budget for 1982 was approved on December 12, 1981, at the MSMA Council meeting in Columbia.

Included in the new budget was an outgoing WATS line from MSMA Headquarters. Council members explained that the toll free line would improve communications with statewide members on membership problems and legislative matters. The line will cost the association approximately $800 per month and will be on a six-month trial period.

In other actions, the Council:

- Heard a report from Dr. Eugene Bricker concerning the Ellis Fischel Cancer Hospital. He announced that Governor Bond has established an advisory committee and a blue ribbon panel to study the hospital's problems. Before giving support to any proposed changes, the Association agreed to study the issue and legislation that involves Ellis Fischel Cancer Hospital.
- Heard a report from Dr. Mohammad N. Akhter, director of the Missouri Division of Health. Dr. Akhter followed Dr. Bricker's remarks by saying, if the Cancer hospital gets to be a Research Center, a Cancer Commission will be established. Dr. Akhter requested that Council supply names of physicians who might be interested in serving on this commission. In addition, Dr. Akhter mentioned that there are several vacancies on the State Board of Health. The Association has sent several names to Governor Bond as suggested replacements.
- Agreed to send a letter to Dr. Akhter giving Association support to legislation that will re-instate Family Practice Residency funding.
- Announced that Dr. Wilfred Wooldridge will be resigning from editorship of *Missouri Medicine* effective April 1, 1982. The Council-appointed position should be filled at the February meeting.
- Named the following MSMA members to the Ad Hoc Committee to study Community Health Centers: Dr. Edwin K. Burford, Cape Girardeau, chairman; Dr. Wayne Stine, Springfield; Dr. John W. Cashman, Kansas City; Dr. Mohammad N. Akhter, Jefferson City; and Dr. William C. Banton, St. Louis.
- Eliminated the August scientific issue of *Missouri Medicine*. MSMA will publish the Directory Issue in August and will publish advertising in that issue.
- Discussed dues increases for the next two years. The increases were referred to the Budget and Finance Committee.
- Accepted reports from the Legislative Committee, Committee on Constitution and Bylaws, Commission on Public Affairs and the Committee on Planning.
- Approved submitting a letter recommending Mrs. Mary Kay McPhee as the American Medical Association Auxiliary's North Central Regional Vice President.
- Set the next MSMA Council meeting on February 5-6, 1982, at the Columbia Holidome.

Medicaid fiscal agent sought

Three firms responded to the Missouri Request for Proposal (RFP) by submitting bids to become the State's Medicaid fiscal agent for the next three years. The low bid of $6.8 million was submitted by General American, a St. Louis firm.

Bids from Computer Sciences Corporation (CSC) and E.D.S. Federal totaled $12 and $14 million respectively. The evaluation criteria require that the lowest and best bid be accepted by the state. A final decision and award of the Medicaid fiscal agent contract should be reached this month.

Reye's Syndrome now listed as a reportable disease

The State Board of Health published in the December 1, 1981, *Missouri Register* an amendment which includes Reye's Syndrome in 13 CSR 50-101.020 Diseases To Be Reported. The amendment became effective December 11, 1981.

Dr. G. E. Thoma appointed to AMA committee

George E. Thoma, M.D., St. Louis, was recently appointed to the American Medical Association's Liaison Committee on Medical Education.

Dr. Thoma is a member of the AMA Council on Medical Education and is vice president of the St. Louis University Medical Center.

Dr. Charles Wheeler receives AMA award

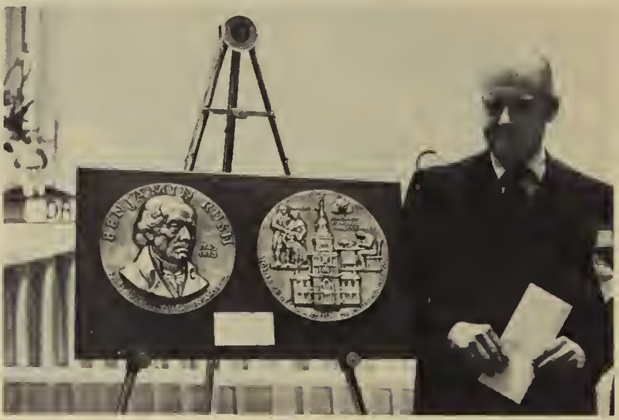
Charles B. Wheeler, Jr., a pathologist from Kansas City, won the American Medical Association's Dr. Benjamin Rush Award for outstanding citizenship and public service. It was presented December 6 at the 1981 Interim Meeting of the AMA House of Delegates held at the Las Vegas Hilton.

The honor, named for the Revolutionary War-era physician and patriot, consists of a $2,500 stipend and a commemorative plaque.

Dr. Wheeler has served his community as Coroner of Jackson County, two-term Judge of Western District, Jackson County; and two-term Mayor of the City of Kansas City.

In health-related areas, Dr. Wheeler is a member of local, state and national medical societies; a number of pathology speciality societies and the American College of Legal Medicine, of which he is a Fellow. He holds faculty appointments at the University of Kansas Medical School and the University of Missouri School of Medicne-Kansas City.

Dr. Wheeler holds an M.D. degree from the University of Kansas and a law degree from the University of Missouri-Kansas City. He has been a pathologist in Missouri since 1957 and has directed his own laboratory in Kansas City since 1965.


Dr. Charles Wheeler

Many benefits accompany MSMA membership

Since 1850, the Missouri State Medical Association has been dealing with health problems and affairs of the medical profession in a variety of ways. Today the MSMA is active in such programs as Student Loans, Group Insurance, Physician Placement, Impaired Physicians, Collections, Legislation, Council on Medical Education, MOMEDICO stock insurance, MSMA Auxiliary groups and much more.

For more information on any of these subjects, contact MSMA, 113 Madison Ave., P.O. Box 1028, Jefferson City, MO 65102.

Dial direct for current MSMA info

Now MSMA members have a pipeline to Missouri medical legislation via the Association Legislation Hotline. Through a code-a-phone system, the Association can now relay to members important information concerning the progression of bills and their effects on organized medicine.

All messages are pre-recorded. Each Thursday afternoon, new messages will be recorded on the system.

Legislation Hotline
314-636-4844

Medicaid recipients co-pay for optional services

A proposed rule implementing recipient co-payment for certain areas of Medicaid was published in the December 1, 1981, *Missouri Register* by the Missouri Division of Family Services. The optional services to be affected by the co-payment requirement include audiological services and hearing aids, dental services and dentures, optometric services and podiatry services.

Participating providers would be required to collect the specified co-payment from Medicaid recipients at the time the service is provided in order to retain participation privileges in the Medicaid program.

The proposed rule lists the following exemptions from the co-payment requirement:

- all Early, Periodic, Screening, Diagnosis and Treatment (EPSDT) recipients
- foster care children
- all Medicare/Medicaid claims

Resolution deadline for Annual Session is Feb. 15

MSMA members, component medical societies and medical student delegates who wish to introduce resolutions at the 1982 Annual Session of the Missouri State Medical Association must submit their resolutions by February 15, 1982, for insertion in the Delegate's Handbook.

Any resolution introduced after that time must be made available to the House of Delegates 24 hours before the session in which it is to be introduced. Sufficient copies of the resolution must be supplied by the individual or society sponsoring the resolution.

At the second session of the House, the same procedure must be followed, but introduction requires two-thirds approval of the House of Delegates. Unanimous approval is needed for introduction at the final session.

The Missouri State Medical Association's 124th Annual Session will be held on April 1-4, 1982, at the Hyatt Regency Hotel in Kansas City.

Medicaid physicians' fees to be increased

For MSMA members, the Department of Social Services recently addressed the problems in Missouri's Medicaid program. Gretchen Enquist, deputy director of Medical Services for the Division of Family Services, spoke at the MSMA Council meeting on December 12, 1981. In her remarks, she pointed out the inadequacies in the present physician fees schedule and announced that the Division is planning to include a 20% fees increase in the upcoming fiscal year budget.

The following graph, supplied by Enquist, shows how Medicaid expenditures have increased an average of 178.24% over the past five years. The highest increases were in optometrics, up 611.04% since 1976. Likewise, nursing homes have increased 308.91% and outpatient services have increased 291.83%. The category with the lowest rate of increase is physicians services, 25.8%.

"The proposed fees increases are geared to encourage usage of the least restrictive, least expensive setting, namely the physicians' offices," said Enquist. Previously, physician providers have been reluctant to accept Medicaid recipients due to low fee reimbursements, causing recipients to turn to hospitals and nursing homes for treatment.

Enquist indicated that physicians' input into this process would be appreciated.

Medicaid expenditures by category of service

	1976	1977	1978	1979	1980	1981
Nursing Homes	$ 32,229,387	42,449,155	55,668,872	70,852,888	96,491,825	131,789,911
Inpatient	44,713,574	53,950,044	63,185,026	71,606,532	80,150,163	116,667,690
Pharmacy	16,402,158	17,657,029	20,418,548	20,898,287	24,516,197	32,533,284
Physician	19,808,155	20,419,561	21,152,147	21,719,455	19,933,577	24,924,702
Outpatient	4,750,966	5,916,393	6,294,709	6,255,340	13,154,927	18,615,761
Dental	4,434,123	5,443,179	5,545,121	7,962,714	10,409,873	13,684,289
Optometric	523,983	624,962	599,191	2,371,273	2,862,302	3,725,708
Other	7,023,472	7,195,954	7,202,143	7,591,923	12,505,518	19,456,062
TOTALS	$129,885,818	153,656,277	180,065,757	209,258,412	260,024,382	361,397,407

AMA collects socioeconomic data on physicians

A new data collection activity, the Socioeconomic Monitoring Systems (SMS), is being established by the American Medical Association. This program is designed to provide more frequent and timely data on socioeconomic indicators of physicians' practices. The information will become an important tool in better representing physicians and informing physicians about rapidly changing trends in the medical field.

Each quarter, a representative national sample of about 2,000 physicians will be asked to participate in an SMS telephone survey. Physicians for the survey will be randomly drawn from the AMA Physician Masterfile. All physicians are urged to cooperate in the survey. The representativeness of the collected data hinges on a high participation rate.

PR Update

President E.T. Hansbrough, M.D., will appoint an MSMA physician to sit on the Policy Board of a new coalition, designed to promote safe, effective and economically sound waste control in the state of Missouri.

The Missouri Waste Control Coalition was recently established to offer all organizations and individuals interested in waste control an opportunity to communicate with each other in a constructive atmosphere.

The Coalition has a wide public representation. Such groups as Associated Industries of Missouri, Missouri State Chamber of Commerce, Missouri League of Women Voters, Missourians Against Hazardous Waste and Missouri Farm Bureau are involved. MSMA's Governmental Relations Director Douglas C. Viehland was selected as secretary/treasurer for the Coalition.

Medicaid patients now limited to five prescriptions a month

Medicaid recipients are now allowed only five prescriptions per month under an emergency rule, which the Missouri Division of Family Services has published in the December 1, 1981, *Missouri Register*. The limit of five includes both filled and refilled prescriptions.

The only allowable exception to the rule is in the case of certain drugs which are commonly prescribed for long term, chronic medical conditions. The list of 183 drugs is included in the proposed rule.

Adoption of the rule is projected to effect a cost savings of $3 million in the remainder of fiscal year 1982 and $4 million in fiscal year 1983.

Give us your opinion on 'Your Health'

The Missouri State Medical Association's Public Affairs Commission needs your help. The Commission would like your opinion on MSMA's health-education publication, *Your Health.* Below is a brief survey.

In 1978, MSMA responded to the public's interest in health care and the physician's need for health education materials by publishing a twice yearly newspaper, *Your Health.* The newspaper is sent as a benefit of membership to physicians for placement in their waiting rooms. The most recent issue was sent last month.

To better plan future issues, MSMA would like to know how we can better meet your needs and the needs of your patients. All of your suggestions and comments will be taken into careful consideration.

Please send the completed survey to: Debbie Sievert, MSMA, P.O. Box 1028, Jefferson City, MO 65102.

'Your Health' Survey

Your Name ____________________ Local Society ____________________

1. Have you seen a copy of *Your Health?* Yes No
2. Do you make it available to patients in your waiting room? Yes No
3. To your knowledge, do your patients read it? Yes No
4. Would you purchase additional copies if they were made available for a nominal fee? (20 cents) Yes No
5. How often do you think *Your Health* should be published? Twice Yearly Quarterly Monthly Not at all
6. What topics would you like to see covered in *Your Health?* ____________________
7. What changes would you like to see in this publication? ____________________
8. Additional comments ____________________

Missouri has fewer medical liability cases

Figures indicate that Missouri's medical professional liability insurance climate ranks favorably when compared to the remainder of the nation.

One of a package of medical professional liability bills passed by the Missouri General Assembly in 1976 called for all companies writing medical professional liability insurance to report closed claims to the State Division of Insurance.

The Division recently released its first figures comparing the malpractice insurance experience in Missouri to the experience nationwide. The Division listed some positive conclusion points for Missouri.

In the category of frequency, the Division took into consideration the availability of physicians, the populace and the number of claims experienced. The index showed only 4.99 claims in four years, which is quite low considering the average Missouri physician load of 861 patients. The national average number of such claims is 36.03.

In addition, the report showed that in Missouri the average loss per successful suit was $15,887, quite lower than the national average of $21,257.

Another important area researchers looked at was the length of time to close a case. In Missouri the total time lag from incident to disposition, took an average of 30 months, compared to the national average of 41 months.

The report also showed that the medical malpractice insurance industry in Missouri has been more than twice as profitable as the national industry.

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Comprehensive decongesting, antihistaminic and anti-secretory reliever for patients with nasal, sinus and other upper respiratory irritation.

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Tablets

DESCRIPTION

Each prolonged action tablet contains:

Phenylephrine Hydrochloride	25 mg
Phenylpropanolamine Hydrochloride	50 mg
Chlorpheniramine Maleate	8 mg
Hyoscyamine Sulfate	0.19 mg
Atropine Sulfate	0.04 mg
Scopolamine Hydrobromide	0.01 mg

Ru-Tuss Tablets act continuously for 10 to 12 hours.

Ru-Tuss Tablets are an oral antihistaminic, nasal decongestant and anti-secretory preparation.

INDICATIONS AND USAGE Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues. Phenylephrine and phenylpropanolamine combine to exert a vasoconstrictive and decongestive action while chlorpheniramine maleate decreases the symptoms of watering eyes, post nasal drip and sneezing which may be associated with an allergic-like response. The belladonna alkaloids, hyoscyamine, atropine and scopolamine further augment the anti-secretory activity of Ru-Tuss Tablets.

CONTRAINDICATIONS Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated.

WARNINGS Ru-Tuss Tablets may cause drowsiness. Patients should be warned of the possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers.

PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS Hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerotomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure.

DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

HOW SUPPLIED:

Bottles of 100 Tablets	NDC 0524-0058-01
Bottles of 500 Tablets	NDC 0524-0058-05

Federal law prohibits dispensing without prescription.

DISTRIBUTED BY:
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Shreveport, Louisiana 71106

MANUFACTURED BY:
Vitarine Company, Inc.
Springfield Gardens, New York 11413

RU-TUSS®

Expectorant

DESCRIPTION

Each fluid ounce of Ru-Tuss Expectorant contains:

Codeine Phosphate	65.8 mg
(WARNING: MAY BE HABIT FORMING)	
Phenylephrine Hydrochloride	30 mg
Phenylpropanolamine Hydrochloride	20 mg
Pheniramine Maleate	20 mg
Pyrilamine Maleate	20 mg
Ammonium Chloride	200 mg
Alcohol	5%

Ru-Tuss Expectorant is an oral antitussive, antihistaminic, nasal decongestant and expectorant preparation.

INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis. Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold.

CONTRAINDICATIONS Hypersensitivity to antihistamines. Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated.

Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant.

WARNINGS Ru-Tuss Expectorant contains codeine phosphate, therefore, the patient should be warned of the potential that this drug may be habit forming. Ru-Tuss Expectorant may cause drowsiness. Patients should be warned of the possible additive effect caused by taking antihistamines with alcohol, hypnotics, sedatives and tranquilizers.

PRECAUTIONS Patients taking Ru-Tuss Expectorant should avoid driving a motor vehicle or operating dangerous machinery (See Warnings). Caution should be taken with patients having hypertension, diabetes, hyperthyroidism and cardiovascular disease.

Caution should also be used in patients with pulmonary, hepatic or renal insufficiency.

ADVERSE REACTIONS Ru-Tuss Expectorant may cause drowsiness, lassitude, giddiness, dryness of mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, and insomnia. Overdoses may cause restlessness, excitation, delirium, tremors, euphoria, metabolic acidosis, stupor, tachycardia and even convulsions.

DOSAGE AND ADMINISTRATION Adults: 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period.

Children 6 to 12 years of age: ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period. Children 2 to 6 years of age: ½ teaspoonful every 4 hours, not to exceed 3 teaspoonfuls in any 24-hour period. Children under 2 years of age: Use as directed by a physician.

HOW SUPPLIED: (16 fl. oz.)

Pint Bottles	NDC 0524-1010-16

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Photo-Comment by James W. Clawson, M.D., Springfield

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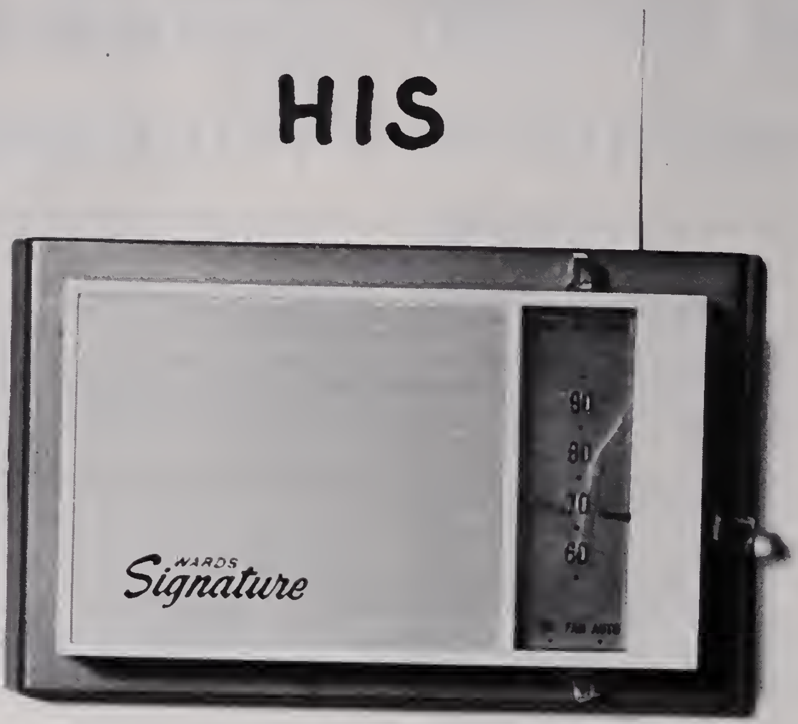
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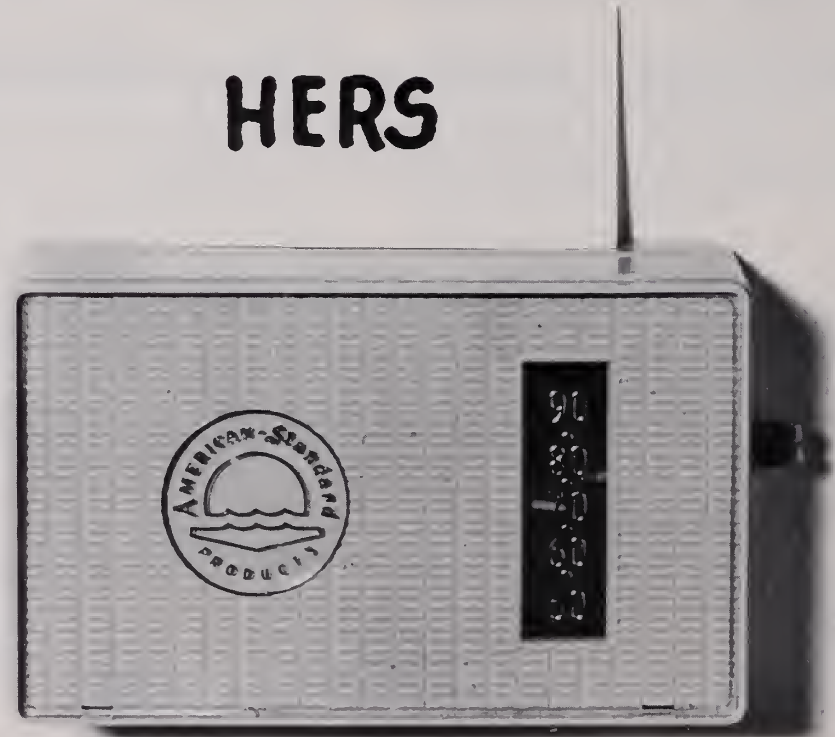
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Editor's Corner

Women! Hot and Cold?

I am aware there are certain physiologic differences between men and women. In fact, I have been aware of this for some time and I am glad. This difference is responsible for much pleasure and considerable turmoil, but necessary for the orderly propagation of the race.

However, opinions aside, there are far more subtle differences between men and women, however simple they might appear. One of these is the appreciation of temperature. On this matter, it seems there is no possible way for men and women to ever reach any sort of understanding.

As I see it, men take a calm and unbiased view of temperature. It is no big deal! If the temperature is above 65°F, a fellow takes off his light jacket and enjoys it. If it is below 65°F, he puts his jacket on. If it gets a lot below 65°F outside, he puts on a heavy jacket or, inside, he cuts in the heat. All very logical and in keeping with conservation of energy, Newton's XVIth law and common sense.

But don't ever try to get women to go along with this! Their thermostats operate in an unrelated manner which considers: (1) Their personal problems on a given day, (2) The television weather forecast, (3) Their score in the afternoon's bridge game and, least of all, (4) The thermometer reading.

I have thought about this a long time. My first impression was to be cautious because I might be unjust. However, since there are lots of women, it is no trouble to observe them and I have found them remarkably alike. To speak plainly, a woman is hot or a woman is cold and the temperature has not one damn thing to do with it. For instance, a woman will bask in the sunlight of an April day with the temperature 68°F. "What a lovely time of year," she will say. She will relax in the most gossamer clothing and enjoy each precious moment. But in the fall, when the earliest blast of oncoming winter whistles around the house, and when the temperature is again 68°F, she hastens for a sweater and bolts for the thermostat. Quicker than a stockbroker can change into Western wear, the room is hot enough to crack one's teeth.

In days gone by, I thought that reason might prevail. On fall evenings I was foolish enough to remark, "But it's only sixty-eight." Since that comment was invariably answered by a withering glance from beneath heavy sweaters and an afghan, I finally learned we simply weren't tuned in on the same frequency. It was then I became convinced this was only one more way in which men and women were irreconcilable. But don't get me into that.

Since I was honestly puzzled by all this, I met an internist friend of mine in the hospital corridor. "Say, Jim," I said, "what gives with women? How come they all get cold the day that daylight savings time ends?" Here was a guy who could answer anything. He could thump your chest, look at an acre of laboratory reports about you and reply with assurance as to the color of the family dog and how many neckties you owned.

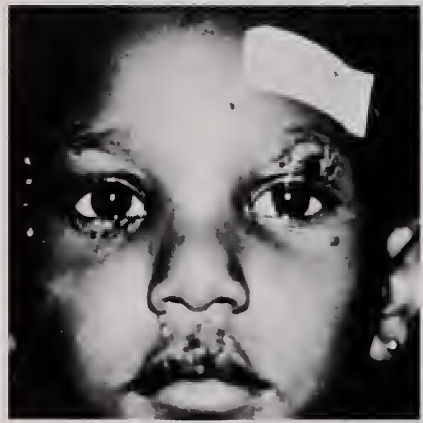
But he stared at me blankly, "Yours, too," he said.

I give up.

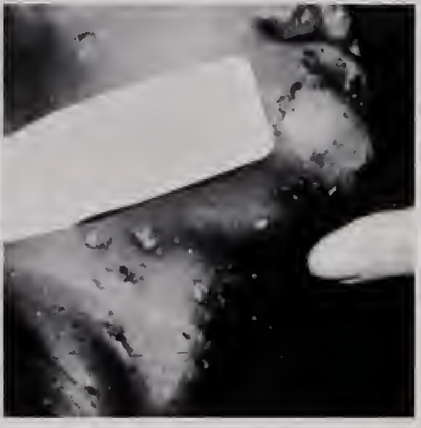
DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo–

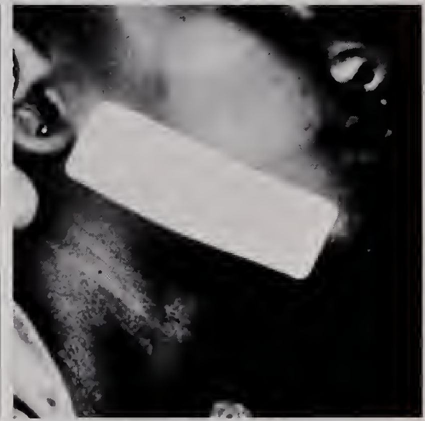
- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. *No* treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular. (12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® *(cloxacillin sodium)*	Given *penicillin V-K*
Staphylococcus aureus	(78 patients)	39	39
Returned to clinic at one week		29†	38†
Treatment failure at one week		0	18 (47.4%)
Staphylococcus aureus and *Streptococcus pyogenes*	(9 patients)	4	5
Returned to clinic at one week		4	5
Treatment failure at one week		0	2 (40%)
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic *Streptococcus*	(1 patient)	0	1
TOTALS:	**102 patients**	**52 patients**	**50 patients**

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus,* 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes,* and 1% beta-hemolytic *Streptococcus*.‡
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.
- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

‡The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

TEGOPEN®
(cloxacillin sodium)
–effective therapy for staph infections of the skin and skin structures

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WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100. 500 mg. in bottles of 100.
Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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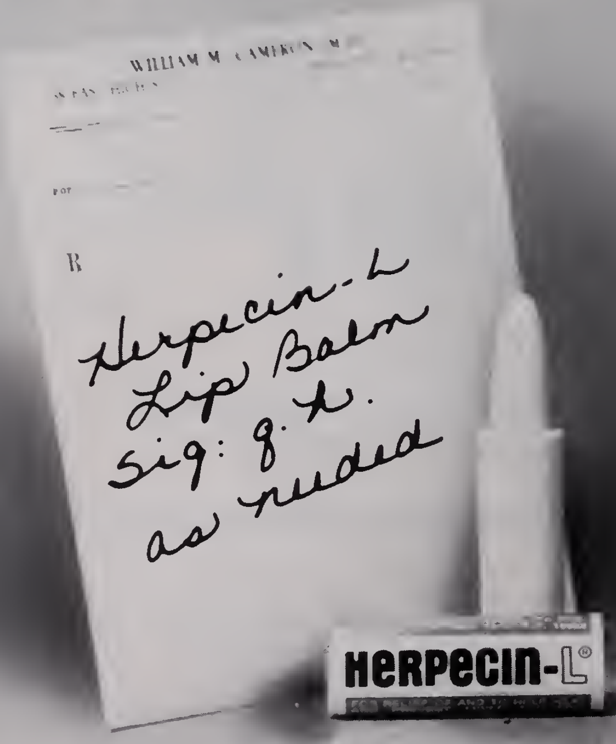

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Volume 79, Number 1 — January, 1982

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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Chest Case of the Month

WILLIAM D. SULLIVAN, M.D., LAWRENCE M. LAMPTON, M.D.
and JAMES D. MALTBY, M.D., *Columbia*

Unusual Cavitary Paratracheal Mass

CASE REPORT

THIS 56-YEAR-OLD white woman is a non-smoker. She was referred for evaluation of a three-week history of cough which was productive of small stony material (Fig. 1). A chest roentgenogram revealed suprahilar adenopathy on the right with an air-fluid level and multiple calcifications. No other symptoms or significant past illness were reported.

A lifetime resident of Missouri, she has two brothers who had tuberculosis 25 years ago. She had minimal contact with them at that time, and results of her tuberculin skin test were reportedly negative. Physical examination findings were within normal limits, as were her hematology and chemistry profiles. A tuberculin skin test (PPD 5 T.U.) was positive (20 mm) at 48 hours. Complement fixation titers for histoplasmosis, blastomycosis and coccidiomycosis were negative.

Standard posteranterior (PA) and lateral views of the chest taken on the initial visit revealed a fluid level in the paratracheal area just anterolateral to the trachea, with multiple small calcifications within the fluid and surrounding the air-containing cavity (Fig. 2). PA and lateral multidirectional tomography revealed an irregular thick-walled cavity with multiple small calculi and an air-fluid level (Fig. 3). A 2 to 3 mm tract can be seen between the cavity and the anterior wall of the right main stem bronchus immediately above the right upper lobe origin (Figs. 4 & 5).

No old films were available, but a chest film report in 1970 stated that "the lung fields are clear bilaterally and there is an area of calcification in the right suprahilar area attributed to old healed disease."

Fiberoptic bronchoscopy revealed stony material eroding into the anterior surface of the right main stem bronchus with hyperpigmentation of the surrounding

Roentgenographic findings, etiologies and management of broncholiths are reviewed in this case report of an unusual presentation of a cavity with an air-fluid level.

Dr. Sullivan is Senior Postdoctoral Fellow-Pulmonary Medicine, Dr. Lampton is Assistant Professor of Medicine and Dr. Maltby is Associate Professor of Radiology, departments of Internal Medicine and Radiology, University of Missouri-Columbia School of Medicine and Harry S. Truman Veterans Hospital.

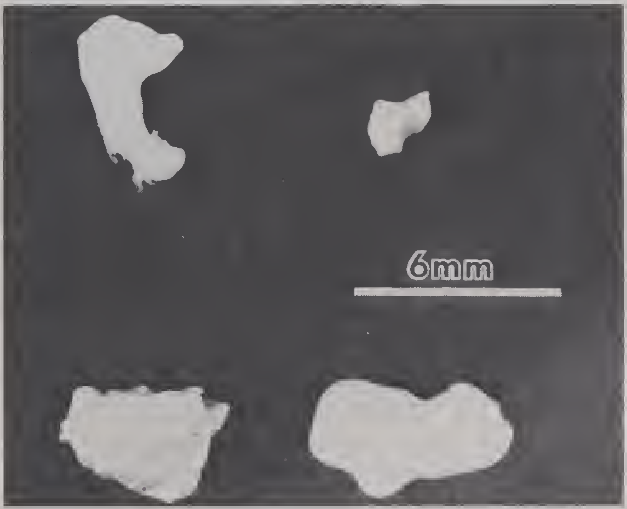

Fig. 1. Sample of the expectorated stones.

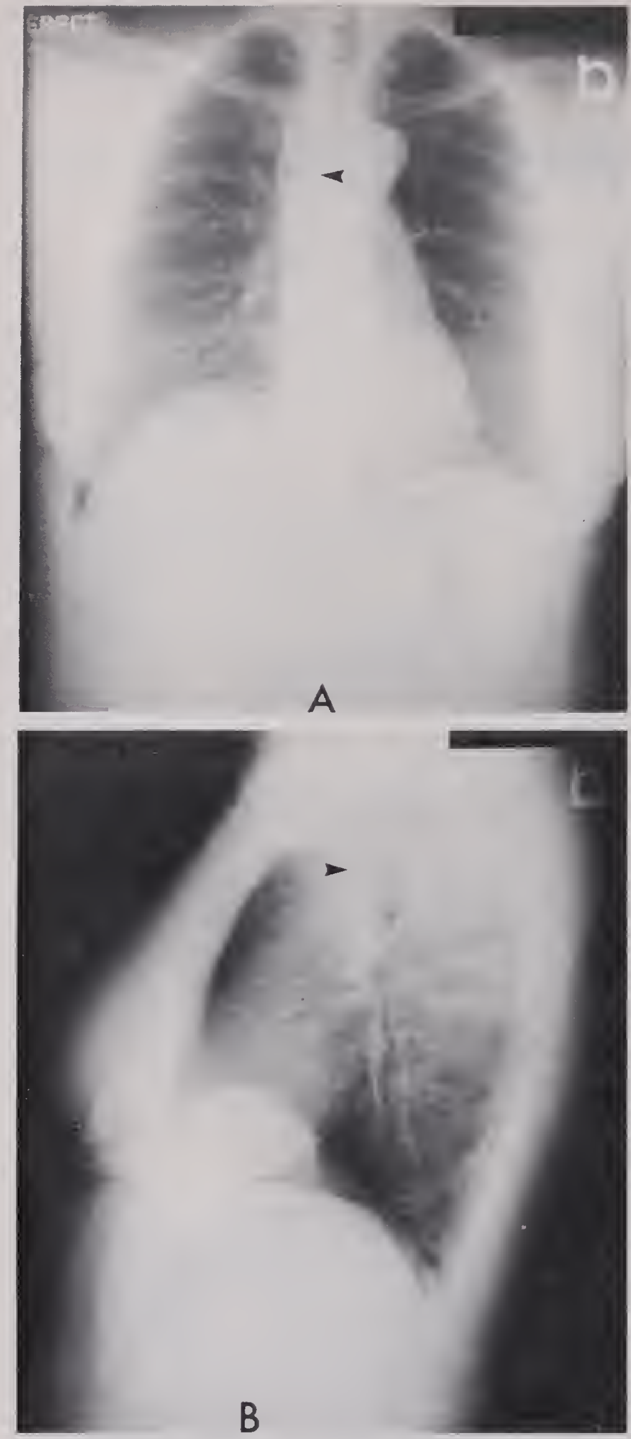

Fig. 2 *(A)* Initial Postanterior (PA) and *(B)* lateral view of chest show an air-fluid level lateral and anterior to tracheal air shadow. Some small calcifications are seen in the region.

bronchial mucosa. There was no carinal or bronchial distortion, no evidence of bronchoesophageal fistula and no bleeding. Microscopic examination of the stony material revealed a broncholith. Stains for acid fast bacilli and fungi were negative on the bronchoscopic specimens and on decalcified stones the patient had expectorated.

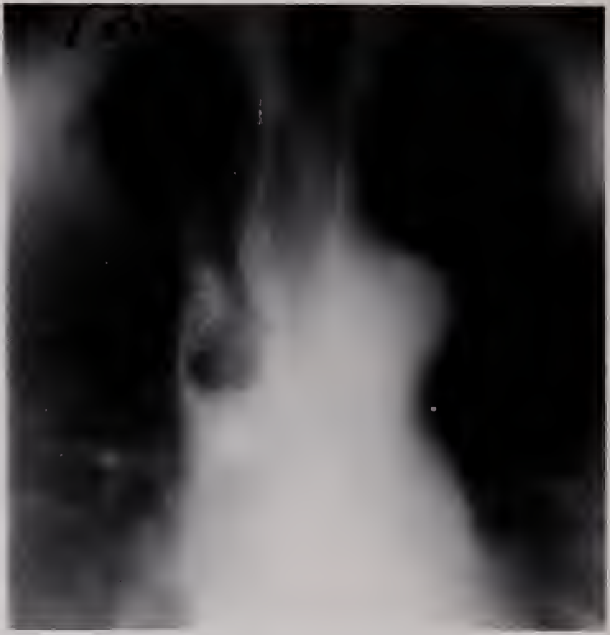

Fig. 3. Upright AP tomography the same day shows an irregular paratracheal cavity 2½ x 8 cm in dimension with a fluid level and multiple small calculi at its base and along its lateral wall.

The patient was discharged and had no further symptoms. PA and lateral films of the chest taken three weeks after the initial film revealed persistence of the cavity with absence of the fluid level and most of the calcification (Fig. 6).

Discussion

This case of broncholithiasis demonstrates a classical clinical presentation with unusual radiological findings of a persistent cavity with an air-fluid level.

The definition of broncholithiasis varies. A classic review by Schmidt required evidence that the calcified contents (broncholiths) of the lymph node invade the bronchial lumen,[1] whereas Mayo Clinic's large series extended the definition to include distortion of the bronchi by peribronchial calcific nodes without bronchial wall invasion.[2] Our patient had broncholith invasion of the bronchial mucosa which was suggested by chest films and proven by bronchoscopy. Broncholiths are thought to form when calcified salts, in an alkaline environment, precipitate in an actively inflamed lymph node.[3] (Broncholiths are composed of calcium phosphate (85% to 90%) and calcium carbonate (10% to 15%) in the proportion found in normal bone.[1] They vary in size from granules to 139 gm (.3 lb).[4] Subsequent ventilatory motion rubs the calcified node against the bronchial wall resulting in erosion into the bronchial wall or obstruction of the bronchus.[3]

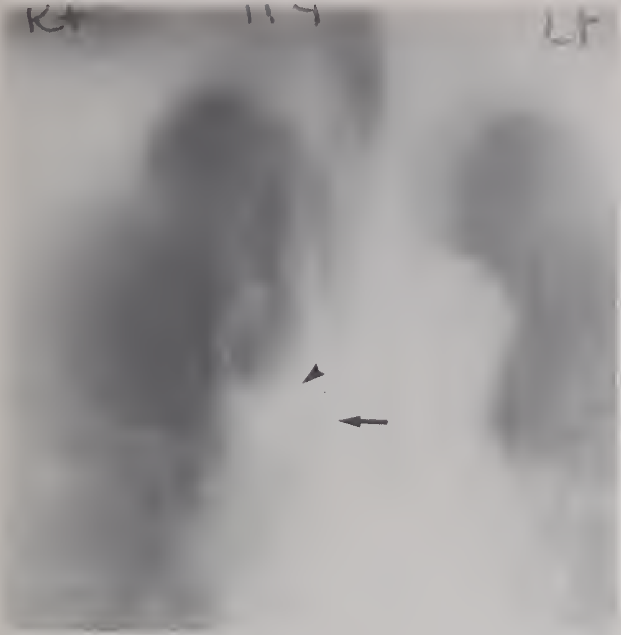

Fig. 4. Supine AP tomogram the same day shows a 2 to 3 mm connection between the cavity and the right main bronchus just above the upper lobe takeoff. Note takeoff *(arrowhead)*. One of the calculi can be seen within the right main bronchus *(arrow)*.

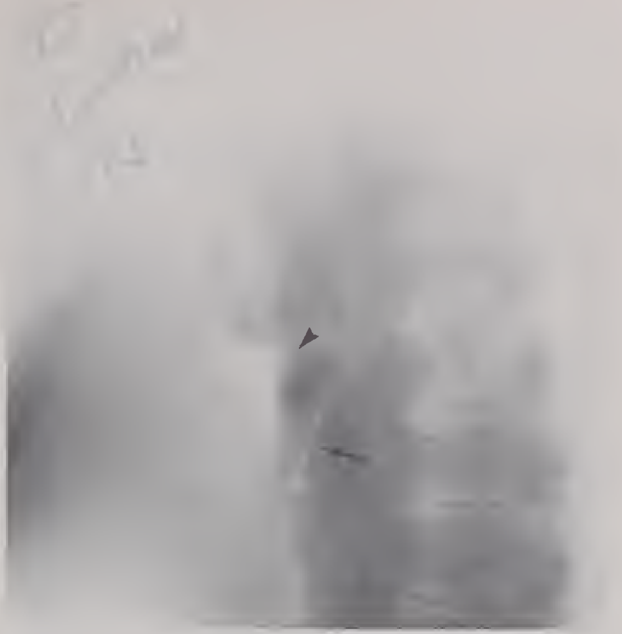

Fig. 5. Lateral supine tomogram shows irregular cavity lying just anterior to the trachea with its 2 to 3 mm connection with the right main bronchus *(arrowhead)* just above the upper lobe takeoff. Note the posterior wall of the bronchus intermedius *(arrow)*.

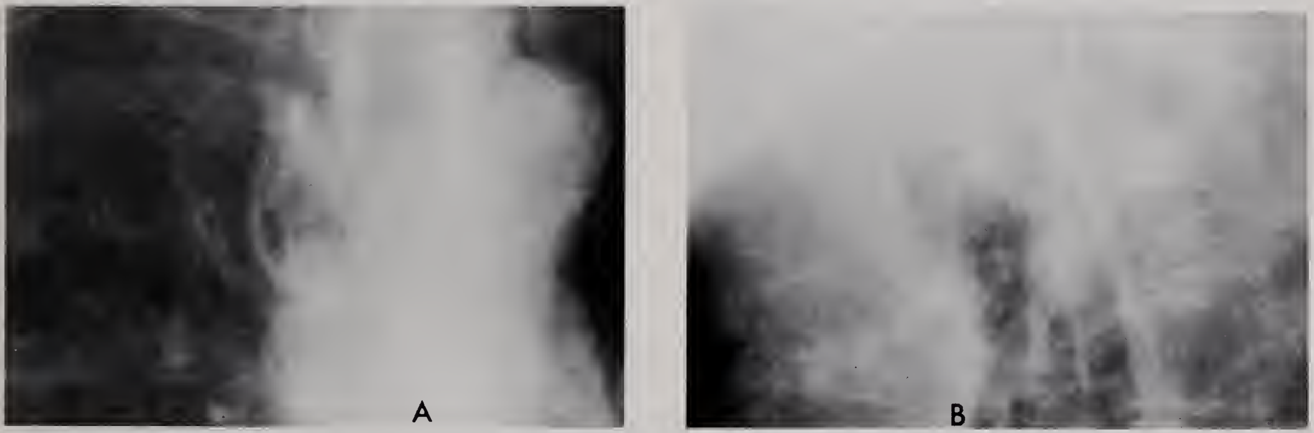

Fig. 6. *(A)* Detail view of the upright PA and *(B)* lateral views of chest done on follow-up visit three weeks later show the cavity without a fluid level and with most of the calcifications gone.

The most common causative agents of broncholithiasis appears to be histoplasmosis and tuberculosis.[5] Since the calcified lymph node may represent past inactive infection, it is not surprising that smears and cultures of broncholiths are often negative. This was the case in our patient who resided in an area endemic for histoplasmosis and who had a positive purified protein derivative (PPD).[5]

The most common clinical manifestations of broncholithiasis are cough, hemoptysis and bronchial obstruction.[6] In a series of 253 patients, the most common symptom was cough, followed in order of frequency by recurrent hemoptysis, fever, chills and purulent sputum.[2] Pleuritic chest pain, localized wheezing and massive hemoptysis were less commonly seen. Thirty-four percent of the cases had a history of broncholith expectoration.[2]

Chest films commonly show perihilar calcification. If the broncholith causes intrinsic or extrinsic narrowing of the bronchial lumen, distal atelectasis, pneumonitis, abscess formation or bronchiectasis may be seen.[3] Tomography provides better localization of calcium deposits and of areas of airway compromise.[2] In this case, tomography delineated the suspected area of broncholith penetration which was confirmed by bronchoscopy.

Rigid bronchoscopy in a large series demonstrated broncholiths in 28% of the patients.[2] Other associated bronchoscopic findings are mucosal inflammation, bronchial distortion, widening of the carina and localized hyperpigmentation.[5]

Broncholithiasis in itself is not an indication for surgery. Nonsurgical treatment of broncholithiasis is often sufficient and also desirable. Surgery can be hazardous due to obliteration of tissue planes with adhesions to vascular structures by the prior inflammatory process.[3] Indications for surgery include suppurative lung disease, life-threatening hemoptysis, bronchoesophageal fistulas and inability to exclude neoplasm.[2] Medical management of a patient with broncholithiasis and a positive tuberculin test follows the American Thoracic Society's guidelines: A person older than 40 years of age with a positive tuberculin test without further evidence of active TB requires no treatment.[7]

SUMMARY

Our patient had a straightforward, clinical presentation except for the chest film depicting an air-fluid level which is uncommon in broncholithiasis. There was subsequent resolution of symptoms with elimination of the calcific material. Since no organism was found, it is possible that the air-fluid level may have been the result of inflammatory irritation by the broncholiths eroding into the bronchial lumen. No medical or surgical intervention is needed at present since the patient is asymptomatic. The microbiological work-up of the expectorated and bronchoscopic material is negative and the chest x-ray is resolving.

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You cannot bring about prosperity by discouraging thrift. You cannot strengthen the weak by weakening the strong. You cannot help the wage earner by pulling down the wage payer. You cannot further the brotherhood of man by encouraging class hatred. You cannot help the poor by destroying the rich. You cannot keep out of trouble by spending more than you earn. You cannot build character and courage by taking away man's initiative and independence. You cannot help men permanently by doing for them what they could and should do for themselves. — *Abraham Lincoln*

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Acoustic Tumors: Surgical Results in 42 Consecutive Operations

Case Reports

Since our initial report of surgical results in our first 20 consecutive acoustic nerve tumor patients,[1] we have more than doubled our series in the succeeding 14 months to a total of 42 cases. This paper reports our consecutive results in these 42 patients and updates our series, relates changes in medical and surgical management and restates our conviction regarding the benefits of the translabyrinthine approach.

The third generation C-T scanner has almost eliminated the necessity for pantopaque cisternography. It is the single most important diagnostic test for acoustic nerve tumors.

Auditory brainstem response (ABR) testing has emerged as the most accurate test in the audiometric battery. However, one word of caution is necessary. Patients with hearing loss may exhibit wave V and interwave latencies deceiving to the inexperienced eye.

A high index of suspicion remains the clinical cornerstone in the diagnosis of acoustic nerve tumors.

Case Material

Although our first 20 cases were published previously, we have incorporated them into the entire series and report the data on all 42 cases in consecutive order (Tables 1 & 2).

Tables 1 and 2 indicate case number, age of patient, date of surgery, use of pantopaque cisternography, tumor size by C-T scan and current long- or short-term result of facial nerve function. Further, the tables are divided into two groups — those patients who had displacement or nondisplacement of the IV ventricle.

As in our original criteria for facial function, we have used the following system: + + + indicates *normal* facial function with *no minimal defect;* + + less than normal facial function, but complete eye closure, with or without some synkinesis, and normal appearance in repose; + some movement of facial musculature, but not acceptable as a good result, and incomplete eye closure although normal facial appearance in repose. The tables indicate both long- and short-term follow-up in all patients at the time of this writing. No doubt, some patients with + + designation will become + + + with a little more time. In addition, two of the three patients who have no facial function are expected to regain function. One of these three had the facial nerve resected without repair. The other two had anatomical continuity at completion of surgery. Rerouting of the facial nerve with end-to-end (VII - VII) neuroanastamosis was accomplished in two patients. Both have + facial function; the second patient is eight months postoperative. Twenty-two patients awakened on the operating table with absolutely *normal* facial function. We consider this a significant benefit from translabyrinthine removal, not

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Forty-two consecutive patients surgically treated between October, 1976 and June, 1981 are evaluated in this article. This adds 22 cases (from May, 1980 through June, 1981) to the authors' previously reported results. They continue to report no fatalities and total tumor removal in all cases except for an elective 95% partial removal in a 77-year-old patient and complete absence of facial function in only three patients. The authors are convinced that translabyrinthine removal is superior to standard suboccipital craniotomy.

The authors are from the University of Missouri-Kansas City and the University of Kansas schools of Medicine. Dr. Luetje also is affiliated with the University of Missouri-Columbia School of Medicine.

This study was sponsored by the Midwest Ear Research Institute.

TABLE 1
ACOUSTIC NERVE TUMORS — VII NERVE FUNCTION
N = 42
NONDISPLACEMENT OF IV VENTRICLE ON C-T

Case	*Age*	*Pantopaque*	*C-T*	*VII Function*	*Surgery*
1	52	+	–	+ + +	Oct 76
3	58	+	–	+ + +	May 77
8	46	+	–	+ +	Mar 78
9	52	+	2.0 cm	+	Jun 78
10	65	+	–	+ + +	Aug 78
12	63	+	–	+ + +	Jan 79
13	35	+	–	+ +	Feb 79
17	63	not done	1.6 cm	+ + +	Feb 80
18	29	not done	0.9 cm	+ + +	Mar 80
20	35	not done	0.45 cm	+ + +	Apr 80
21	49	not done	2.5 cm	+ + +	May 80
22	48	not done	1.36 cm	+ + +	Jul 80
24	57	not done	1.8 cm	+	Aug 80
25	52	+	IAC	+ + +	Aug 80
27	42	not done	2.0 cm	+ + +	Oct 80
28	58	not done	1.5 cm	+ + +	Nov 80
29	62	Memphis	0.5 cm	+ + +	Nov 80
30	66	not done	1.5 cm	0	Dec 80
*31	40	not done	1.0 cm	+ +	Dec 80
32	62	+	0.9 cm	+ +	Jan 81
33	53	not done	1.0 cm	+ + +	Jan 81
34	60	not done	1.0 cm	+ + +	Feb 81
35	65	St. Louis	2.0 cm	+ + +	Mar 81
36	63	not done	1.6 cm	+ + +	Mar 81

* Facial paralysis seven years previously with + + residual presumably Bell's palsy.

TABLE 2
ACOUSTIC NERVE TUMORS —
VII NERVE FUNCTION
N = 42
DISPLACEMENT OF IV VENTRICLE ON C-T

Case	*Age*	*Tumor Size*	*VII Function*	*Surgery*
2	36	1.8 cm	+ + +	Jan 77
*4	56	3.5 cm	0	Dec 77
5	68	3.2 cm	+ +	Sep 77
†6	57	3.0 cm	+	Oct 77
7	51	3.2 cm	+ +	Nov 77
11	21	2.5 cm	+ + +	Jan 79
14	55	2.0 cm	+ + +	Feb 79
15	54	1.7 cm	+ +	Nov 79
*16	26	3.8 cm	+ + +	Jan 80
19	64	2.5 cm	+ +	Mar 80
23	42	3.0 cm	+ + +	Jul 80
‡26	32	3.0 cm	+	Oct 80
37	39	3.0 cm	0	Mar 81
38	40	3.9 cm	+ + +	Mar 81
39	23	3.0 cm	+ + +	Apr 81
40	35	3.6 cm	+ +	Apr 81
41	63	2.5 cm	+ +	May 81
†42	77	3.5 cm	+ + +	Jun 81

* Preoperative hydrocephalus
† Elective 95% partial removal
‡ Rerouting of VII nerve and (VII-VII) neuroanastomosis

achieved by suboccipital surgery.

All of these patients have been operated on since the advent of C-T scanning. Fewer pantopaque cisternograms were done with identification of smaller tumors on third generation C-T scanners. We feel it is important, henceforth, for the reporting of tumors to be in millimeters or centimeters, with or without displacement of the IV ventricle. Surgical estimate of tumor size at the operating table for reporting of results is, at best, inaccurate. Therefore, these cases are reported in Tables 1 & 2 with tumor measurements by C-T cursor when at all possible. Occasionally, an outside scan did not have a cursored measurement requiring a fixed scale measurement.

CASE REPORTS

The following case reports illustrate preservation of hearing through the middle fossa approach, postoperative cerebrospinal fluid (CSF) rhinorrhea requiring secondary closure and repair, and elective 95% partial removal in a 77-year-old patient.

Case #25 A 52-year-old woman had tinnitus and unilateral sensorineural hearing loss in the right ear of

1 year's duration. Her speech reception threshold (SRT) was 25 dB and speech discrimination score 88% with a high tone loss. Electrostagmography (ENG) showed 22% reduced vestibular response in the left ear and x-rays showed symmetrical internal auditory canals but the crista falciformis was poorly seen on the right and the posterior lip slightly shortened. Five months later, ABR was abnormal and the diagnosis of an acoustic tumor was made on C-T scan and pantopaque cisternography. The tumor was predominantly intracanalicular. On Aug. 20, 1980, middle cranial fossa removal was accomplished but with intradural temporal lobe retraction, dividing the superior petrosal sinus. Total tumor removal was obtained and hearing saved; she developed hallucinations and transient visual field defects. Both cleared. Now she uses the phone in her right ear, has normal vision and normal facial function. SRT is 40 dB, speech discrimination 80% (April 4, 1981).

COMMENT

This patient had an excellent hearing result, but we feel intradural temporal lobe retraction caused her transient visual field defect.

Case #21 A 2.5 cm right acoustic tumor was diagnosed on C-T scan in this 49-year-old man. Translabyrinthine removal with normal postoperative facial function was performed in May, 1980. He was discharged on the fifth postoperative day (POD). He was readmitted on the sixth POD because of suspected meningitis. During this admission, CSF cultures were negative, left pneumonia developed, CSF rhinorrhea occurred, subsiding spontaneously and he was treated with ampicillin, chloramphenicol and gentimicin. On the 25th POD, he developed meningitis and was hospitalized and treated with chloramphenicol, and CSF rhinorrhea again was apparent. On the 31st POD, the CSF leak was repaired by incus removal and placing muscle into the middle ear from above. Three weeks later, CSF rhinorrhea without meningitis recurred. Fifty-nine days after his initial tumor surgery, a second attempt was made to seal the leak through a transcanal approach and simultaneous spinal tap. About ten days later, he redeveloped CSF rhinorrhea. On the 76th day following tumor removal, a third and final operation to seal the CSF leak was performed and the eustachian tube was completely obliterated from the middle ear through the epitympanum. After this, he had no further CSF leak. Facial function was normal throughout.

COMMENT

This case taught us the value of opening the facial recess and filling the middle ear and eustachian tube orifice with muscle on future patients to prevent postoperative CSF rhinorrhea.[2]

Case #42 A 77-year-old widow had a six-or-seven-year history of balance disturbance and hearing loss with tinnitus in the left ear. C-T scan revealed a 3.5 cm acoustic tumor with displacement of the IV ventricle. She was in excellent health, lived alone, drove her car, played bridge and was very active. She now felt disabled by balance dysfunction. No nystagmus was elicited with 30 cc of ice water in the left ear and she had no speech discrimination score in the left ear. In June, 1981, translabyrinthine elective removal of 95% of the tumor was accomplished by removing all of it from the brainstem and leaving a shell of tumor over the VII nerve from brainstem to the lateral extent of the IAC. Facial function was normal postoperatively and on the third POD, she indicated balance function had not changed.

COMMENT

This case illustrates elective partial tumor removal to assure facial function and yet perform labyrinthectomy, VIII nerve section and brainstem removal of the tumor. The patient's age, absence in vestibular function on ENG and vitality were all important factors in preserving the quality of life in this woman.

RESULTS

We feel that total tumor removal was accomplished in all cases except Case #42. There were no fatalities. Complete absence of facial function occurred in only three patients and no increased neurological deficits other than VII and VIII were ever present.

One middle cranial fossa approach preserved useful hearing in Case #25. An attempt to preserve hearing through suboccipital, transmeatal approach was unsuccessful in Case #8. Seven years prior to surgery, our 31st patient developed a presumed Bell's palsy with slight residual weakness. Facial function postoperatively was unchanged.

Tables 3, 4 and 5 give the overall results in our series and compare total removal, fatality and facial function with other reported series.

TABLE 3
ACOUSTIC NERVE TUMORS
N=42
LONG- AND SHORT-TERM VII NERVE FUNCTION RESULTS

Tumor Size	*Proportion With Weakness*	*Percentage With Weakness*
IV ventricle midline	6/24*	25.0%
IV Ventricle displaced	8/18	44.4%
Total	14/42	33.3%

* One patient had "Bell's palsy" seven years prior tumor removal with some residual weakness.

TABLE 4
ACOUSTIC NERVE TUMORS
N = 42
LONG- AND SHORT-TERM
VII NERVE FUNCTION RESULTS

Tumor Size	*Proportion With Paralysis*	*Percentage With Paralysis*
IV ventricle midline	1/24	4.2%
IV ventricle displaced	2/18	11.1%
Total	3/42	7.1%

TABLE 5
ACOUSTIC NERVE TUMORS
N = 42
SUMMARY

	No. Cases	*Total Removal*	*Mortality*	*VII Paralysis*
Luetje Whittaker	42	97.6%	0%	7.1%
House *et al*[3]	500	93.4%	2.8%	13.5%
Ditullo Malakasian Rand (1978)[4]	79	91.0%	3.7%	12.0%

Complications

Our major and most troublesome concern has been postoperative CSF rhinorrhea (Cases #10, #11, #21) and CSF wound leak (Cases #24 and #40) requiring secondary closure of the wound. The case report of Patient #21 is detailed to explain how this can be a significant problem for the patient. Since this case, we have opened the facial recess and obliterated the middle ear and eustachian tube in all cases. We have not had any subsequent CSF rhinorrhea. Three patients (#25, #26, #30) had postoperative psychoses of undetermined causes. One patient required transfer to the psychiatric unit. All of these received 4 mg of dexamethasone and 300 mg of cimetadine every 6 hours pre- and postoperatively.

Beginning in July, 1980, we have prescribed prophylactic antibiotics for all patients. Since then, we have had no meningitis cases. Beginning in January, 1981, we have used steroids in all patients regardless of tumor size.

Discussion

We devised an operation for very large acoustic nerve tumors and meningiomas which we call a one-stage transtentorial, retrosigmoid, translabyrinthine approach. In this approach, the tentorium is cut and the superior petrosal sinus is ligated and divided. The translabyrinthine approach is completed without opening the dura. The retrosigmoid dura is exposed and opened. The tumor is gutted extensively from behind and above and then removed in standard translabyrinthine fashion.

We used this approach for Case #16 and again on a large meningioma with preservation of facial function. For Cases #37, #38, and #39, we were prepared to use this approach but found the routine translabyrinthine approach quite adequate for exposure. Because of tight space in Cases #40 and #41, extradural middle fossa dural retraction with the Yasargil retractor and Silverstein sigmoid sinus retractor were of help.

In looking at all of our cases, the translabyrinthine approach was without any embellishment in 35 of the 42 cases.

Conclusion

Based upon our combined (both authors) experience with the translabyrinthine approach, we are convinced that the translabyrinthine approach is superior to the old suboccipital approach with regard to facial function postoperatively. This report is an update of our own earlier series and results in now 42 cases. We urge other surgeons performing acoustic nerve tumor surgery to come forward and report their results. We feel a surgeon must use personal cases for review and comparison and not extrapolate the results of distant surgeons when discussing treatment with patients afflicted by acoustic nerve tumors.

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Snoring, Sleepiness and the Obstructive Sleep Apnea Syndrome

THE INCIDENCE OF OBSTRUCTIVE SLEEP APNEA SYNDROME (OSA) continues to increase as the clinical symptoms are recognized by more physicians. Karacan *et al*[1] have estimated that more than 2 million people in the United States have sleep apnea. This suggests that OSA is the most common cause of excessive daytime sleepiness (EDS), a pathological sleep tendency which frequently impairs the patient's professional, social and family life.[2] Recognition of this syndrome is important not only because of psychosocial consequences but, also, because OSA can contribute to cardiopulmonary disorders[3, 4] and is exacerbated by the most common treatment for sleep disorders, hypnotic medications.[5]

DIAGNOSING OBSTRUCTIVE SLEEP APNEA

A definitive diagnosis of OSA can be made only when the patient is sleeping. Waking pulmonary and cardiac function is most commonly normal. Structural abnormalities of the upper airway (e.g., hypertrophic tonsils or adenoids, deviated septum, Pierre-Robin syndrome) can contribute to OSA but have been observed in a small minority of patients.[6] Nevertheless, a preliminary diagnosis of OSA can be made during a thorough interview. Questioning a bedpartner is often helpful because the patient may not be aware of some symptoms. Frequent symptoms of OSA are shown in Table 1. EDS and loud snoring are highly suggestive of OSA. Obesity also is present in many cases, but not all. Other symptoms include gasping for air at night, abnormal motor movements during sleep, automatic behavior, headache upon awakening, enuresis and personality changes.

Patients suspected of having OSA should have polysomnographic recordings performed to provide a definitive diagnosis. These recordings document the frequency and duration of apneic episodes and subsequent alterations in oxygen saturation. Typical polysomnographic recordings include the electroencephalogram (EEG), electro-oculogram (EOG) and submental electromyogram (EMG). These measures allow the identification of sleep onset and sleep stages. Nasal and oral airflow are monitored with thermistors and respiratory effort is detected with a strain gauge or pressure transducer. Oxygen saturation is monitored continuously with an ear oximeter and provides a noninvasive measurement of the physiological severity of OSA. The electrocardiogram (V5) also should be recorded to detect cardiac arrhythmias.

An apneic episode is defined as a cessation of airflow at both the nose and mouth for a minimum of ten seconds. Obstructive apnea is indicated when nasal and oral airflow are absent but respiratory effort continues. Central apnea refers to a lack of air exchange without respiratory effort. Mixed apnea refers to an episode which initially lacks respiratory effort followed by resumed effort which is unsuccessful in reestablishing airflow. Obstructive apnea is by far the most commonly observed type of apnea. Although all types may occur in a single patient, obstructive episodes typically predominate. The few patients with primarily central apnea generally complain of insomnia rather than EDS.[6] A few brief apneic episodes may occur in normal individuals and there are, of course, many asymptomatic snorers who have no EDS or hypoxemia.

At least 30 apneic episodes must occur during a seven-hour sleep period for a diagnosis of OSA.

TABLE 1
FREQUENT SYMPTOMS AND CHARACTERISTICS OF THE OBSTRUCTIVE SLEEP APNEA PATIENT

Loud Snoring
Excessive Daytime Sleepiness
Abnormal Motor Movements During Sleep
Obesity
Narrow Oropharyngeal Introitus
Gasping or Choking During Sleep
Hypertension
Automatic Behavior
Morning Headache
Enuresis
Personality Change
Dry Throat Upon Awakening

The use of polysomnography in the investigation of a sleep-related disorder is described in this article. The Deaconess Hospital Psychosomatic Research Laboratory plans to conduct a number of clinical research projects in this fashion.

Both cases reported here were evaluated while Dr. Walsh was Assistant Director of the Sleep Disorders Center at the University of Cincinnati in conjunction with Milton Kramer, M.D. He is now Director of the Sleep Disorders Center at Deaconess Hospital.

At Deaconess Hospital, Dr. Ulett is Director of the Department of Neurology and Psychiatry, Director of the Psychosomatic Research Laboratory and Medical Director of the Sleep Disorders Center; Dr. Schweitzer is Research Psychologist at the Sleep Disorders Center; and Dr. O'Regan is Chief of Medicine and Director of Medical Education. Also, Dr. Ulett is Clinical Professor of Psychiatry and Dr. O'Regan is Assistant Professor of Medicine at St. Louis University School of Medicine.

However, most patients display between 100 to 800 apneic episodes each night. Each of these last 10 to 120 seconds and is typically accompanied by significant oxygen desaturation and sinus arrhythmia.[5] Second degree A-V block and various grades of ectopic activity also have been reported to be associated with OSA.[7, 8] Further, hemodynamic changes occur[9] and have led to speculation that sustained pulmonary hypertension and right-sided heart failure may result from OSA.[9, 10]

The following case reports illustrate the OSA syndrome.

CASE REPORTS

Case #1 A 50-year-old man was referred to the Sleep Disorders Center for an evaluation of his EDS complaint. Three months prior to referral, the patient began falling asleep frequently during the day. Usually, this occurred during periods of inactivity, but he also reported falling asleep while driving, smoking cigarettes and, in one instance, while on his hands and knees laying carpeting. He was able to maintain alertness only by being physically active. He had not been able to work because of the EDS.

The patient snored very loudly as illustrated by the fact that the family living upstairs in the patient's apartment building complained about it. His wife reported that he threw his arms around in his sleep. He also reported having nausea upon awakening. Physical examination revealed that the patient was 5 ft 10½ in tall and weighed 332 pounds. He reported that he had gained 92 lb in the past six months. His blood pressure was 142/100 while taking methyldopate (Aldomet). He had pitting edema from knees to ankles in both legs. The liver was not palpable. The remainder of the examination showed no abnormalities.

Waking pulmonary function test results were normal with the exception that his lung volumes were mildly restricted due to his obesity. Results of chest x-ray, clinical electrocardiogram (EKG), thyroid function studies and complete blood count (CBC) were all normal.

Polysomnography was performed on three consecutive nights and revealed abnormal sleep patterns. The patient's sleep was marked by increased wakefulness and stage one sleep, the absence of slow-wave sleep and decreased rapid eye movement (REM) sleep. The patient slept only 362, 323.5 and 293.5 minutes on the three nights despite falling asleep in 3, 1 and 2.5 minutes, respectively. The short sleep latencies are indicative of the degree of EDS.

Respiratory monitoring revealed 442 apneic episodes during the recording on night two (nights one and three were similar). All were obstructive except for three mixed apneic episodes. The longest apnea was 29 seconds. Oxygen saturation decreased considerably with each apnea from a steady state level of 95%. The lowest saturation recorded was 60%. The resting heart rate was 90 bpm and sinus bradycardia occurred with each apnea. The slowest heart rate was 52 bpm.

A Multiple Sleep Latency Test (MSLT) was performed to assess the degree of EDS. This procedure provides the patient with five 20-minute opportunities to sleep, at 10 AM, noon, 2PM, 4 PM and 6 PM on a single day. The patient fell asleep in 10, 30, 30, 30 and 60 *seconds* during the five naps, respectively.

The patient was referred to a nutrition specialist who instituted a weight loss program. He lost 54 lb in six months and was reevaluated at the Sleep Disorders Center after weight loss. The lower extremity edema had improved and his blood pressure was 148/70 (on a regimen of Aldomet).

The patient's sleep had improved. Wakefulness and stage one were decreased and slow-wave sleep was present. Respiratory recordings were free of apnea. Oxygen saturation was maintained at about 90% most of the night with the lowest level being 84%. Heart rate ranged from 106 to 95 bpm, and cyclic sinus bradycardia was not present. EDS was improved both subjectively and as reflected by the MSLT. The patient took 3, 4.5, 5.0, 5.5 and 15 *minutes* to fall asleep during the reevaluation.

The patient was encouraged to continue weight loss and was able to return to work.

Case #2 An 8½-year-old boy was referred to the Sleep Disorders Center for evaluation of loud snoring and possible sleep apnea. The patient had snored since 2 or 3 years of age, but the loudness had increased dramatically about two years prior to referral. He also had been noted to stop snoring for brief periods during which sternal retractions occurred. Two weeks before presentation, the patient was observed as becoming apneic and cyanotic while sleeping and was shaken by his uncle before respiration resumed.

The patient was a mouth breather with "noisy" respirations while awake. His performance in school had been satisfactory. There was no complaint of EDS by the patient or his mother. The nursing records did indicate that the patient appeared to be tired during the physical examination. Mother reported enuresis three to four times per week for the past few years, despite successful toilet training by age 2. The patient also was reported not to have gained weight or increased stature for the past three to four years.

Physical examination revealed that he was 48½ in tall and weighed 45½ lb which is below the fifth percentile for both height and weight. Vital signs were temperature, 98.6; pulse rate, 112 bpm; and respiration rate, 20. Both tonsils were 3+ enlarged. Chest and heart showed no abnormalities. The remainder of the examination was non-contributory.

Polysomnographic recordings revealed nearly normal sleep architecture. An increase in wakefulness and stage one sleep was the only abnormality and was probably related to the novelty of the laboratory situation.

Respiratory monitoring indicated significant amounts of totally and partially (hypopnea) obstructed breathing. For example, on the first night, the patient displayed 34 obstructive apneic episodes with the longest being 44 seconds. There also were 209 obstructive hypopneic episodes which ranged in duration from 10 to 90 seconds. Most apneic and hypopneic episodes were accompanied by sinus bradycardia. The steady heart rate during sleep was 104 bpm and decelerated to less than 70 bpm with most obstructed breathing periods. The greatest heart rate change was 104 to 58 bpm. Unfortunately, oxygen saturation was not monitored during the initial evaluation.

A fluoroscopic examination[11] of the upper airway was made during sleep and indicated that both the nasal and oral airways were dramatically narrowed upon each inspiration with periods of total occlusion of the nasal and hypopharyngeal airways.

A tonsillectomy and adenoidectomy were performed and the patient was reevaluated two months postoperatively. Sleep architecture was essentially unchanged from the initial recording. Respiratory monitoring revealed a few central apneas (which are normal) but *no* partially or totally obstructed breathing. No cyclic bradycardia was present although the heart rate did decrease to 60 bpm during one REM period. The patient's resting heart rate was 100 bpm. Ear oximetry documented that oxygen saturation remained at 93% or greater throughout the entire recording.

Nine months postoperatively, the patient's mother reported that he has neither snored nor had an enuretic episode since the surgery. Further, he had gained 18 lb and 1½ in in height.

TREATMENT

Several factors must be considered before selecting a treatment strategy. They are the degree of disability due to EDS, the severity of cardiovascular sequelae, the presence of structural abnormalities of the airway, and the potential for patient compliance.

The possibility of an anatomic airway obstruction should be evaluated by examination of the pharynx and larynx. Fluoroscopic examination of the airway during sleep[11] is frequently helpful in determining the locus of obstruction. Surgical correction of the abnormality may restore normal sleeping respiration.

If there is no apparent structural abnormality and the EDS and/or cardiovascular complications are not severe, weight loss is recommended for the obese patient. Although difficult, weight loss is frequently more desirable than surgical alternatives, particularly for patients with minimal disability. Data from a few cases suggest that for some obese patients, a loss of 10% to 15% of their body weight is sufficient to relieve OSA.

Patients who are socially and/or occupationally disabled or who display severe cardiovascular abnormalities should be considered for tracheostomy[7] or uvulo-palato-pharyngoplasty.[12] A tracheostomy bypasses the obstruction and allows free exchange of air. The tube may be plugged during waking hours to allow normal speech. The patient should be instructed in the care of the tracheostomy and may require psychological support. Cardiovascular symptomatology and EDS typically disappear after tracheostomy.[7] Preliminary data indicate that uvulo-palato-pharyngoplasty[12] markedly reduces the severity of OSA and may have fewer complications. This procedure removes excess mucosa from the pharynx and pharyngopalatal arch and may involve shortening of the uvula resulting in an increased oropharyngeal introitus.

A recent report indicates that some OSA patients may benefit from progesterone administration.[13] However, the occurrence of side effects and the difficulty in identifying responders to such therapy suggests that further work is needed.

CONCLUSION

OSA appears to be a relatively frequent disorder with a consistent clinical presentation. Care for these patients hinges on the identification of OSA, assessment of its severity and selection of an appropriate treatment.

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(Continued from page 26)

STEPHEN HAMBURGER, M.D., *and*
DAVID RUSH, Pharm.D., *Kansas City*

Hypomagnesemia

MAGNESIUM is one of the most abundant elements in the body; it is the fourth most plentiful cation and the second most abundant intracellular element. Nevertheless, the clinical relevance of magnesium has been demonstrated only in recent years. Accordingly, this article presents a review of the pathophysiology, clinical consequences and treatment of hypomagnesemia, the most common abnormality in magnesium balance.

PATHOPHYSIOLOGY

The normal adult body contains approximately 20 to 30 gm or 2,000 mEq of magnesium with half of this amount in the skeleton and the other half is almost equally distributed between muscle and nonmuscular soft tissue.[1] Magnesium is located predominantly within cells. The normal serum concentration is approximately 1.5 to 2.0 mEq/L. Similar to calcium, magnesium is present in two principal forms, ionized, which is the main form, and protein bound, which is approximately 35%.

The average daily intake of magnesium is about 25 mEq or 300 mg, most of which comes from green vegetables, meat, grains and seafood.[2] An approximate intake of 0.30 to 0.35 mEq/kg of body weight per day is needed to maintain a normal balance. Approximately 30% to 60% of magnesium is absorbed in the small intestine. In addition, a minor percentage is retained in the large intestine. About one third of ingested magnesium is excreted in the urine; fecal excretion reflects principally unabsorbed magnesium as little is secreted into the gut.

Since there is little control of intestinal absorption of magnesium, excessive dietary amounts are readily absorbed. Thus, the kidney is the principal regulator of total body magnesium. Although almost 2,000 mg of magnesium are filtered through the kidneys each day, only 3% to 5% of filtered magnesium is lost in the urine. This is due to an effective tubular resorption. In fact, subjects placed on a low-magnesium diet will rapidly decrease their renal loss to a level that will protect effectively against hypomagnesemia.

Hypomagnesemia develops from decreased intake, decreased intestinal absorption, excessive intestinal loss and increased urinary losses (Table 1). The most common causes of magnesium deficiency seen in clinical practice include malabsorption, intestinal bypass surgery, diuretic therapy and severe diarrhea.

Many conditions of hypomagnesemia have multiple causes. Alcohol withdrawal is a good example; such patients have reduced their magnesium intake and have increased intestinal losses secondary to vomiting and diarrhea. In addition, secondary hyperaldosteronism, which is commonly present in chronic alcoholics, produces renal magnesium wasting. Alcohol itself may also inhibit tubular reabsorption of magnesium. Lastly respiratory alkalosis, a common acid-base abnormality in alcohol withdrawal, produces an intracellular magnesium shift. It is important to realize that since magnesium is predominantly an intracellular cation, hypomagnesium does not necessarily mean that total body magnesium depletion is present. Nevertheless, determinations of serum magnesium remain the most practical method for detecting magnesium deficiency.

PRESENTATION

Clinical

The predominant manifestations of hypomagnesium are neurologic and cardiac-related (Table 2).[3] Neurologic symptoms include tremors, restlessness, fasciculations, mental disturbances, convulsions, coma and tetany. Importantly, it is

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Only recently has magnesium balance in patients been shown to have clinical relevance. This paper presents a review of the pathophysiology, clinical consequences and treatment of hypomagnesemia, the most common abnormality in magnesium balance.

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clinically impossible to distinguish tetany due to hypomagnesemia from tetany due to hypocalcemia. In fact, hypocalcemia is a common electrolyte disturbance associated with magnesium depletion. Several studies have shown that magnesium deficiency may inhibit the synthesis, secretion and/or peripheral action of parathormone which results in a functional hypoparathyroid state and hypocalcemia.[4, 5] Physical examination commonly reveals positive Chvostex and Trousseau's signs.

Cardiac manifestations include supraventricular tachycardias and ventricular arrhythmias. Whether these disturbances are related solely to magnesium depletion or to associated electrolyte abnormalities, such as hypokalemia, is unknown.

Laboratory (Table 3)

No routine laboratory finding is specific for hypomagnesemia. Other electrolyte abnormalities, particularly hypocalcemia and hypokalemia, frequently accompany hypomagnesemia. The hypokalemia may possibly be secondary to a defect in renal potassium conservation. Hyperphosphatemia is found occasionally. Electrocardiographic abnormalities present with magnesium depletion include nonspecific ST-segment depressions, decreased amplitude of T waves, prolongation of the QT interval and occasional shortening of the ST segment. Other laboratory disturbances found in the magnesium deficiency patient reflect the underlying disorder.

Treatment

Prevention

The approximate daily requirement of magnesium is 300 to 400 mg of which 30% to 60% is absorbed from the gastrointestinal tract. Thus, a patient who has no oral intake and is being maintained on a regimen of intravenous fluids should receive 100 to 200 mg (8 to 16 mEq) of magnesium daily. This amount of magnesium is present in 1 or 2 gm of magnesium sulfate (Table 4).

Therapy of Magnesium Deficiency (Tables 5 & 6)

Emergency treatment of magnesium depletion is indicated in patients with alcoholic withdrawal seizures and ventricular arrhythmias.[3] The former should be treated with a loading dose of 4 gm (33 mEq) of magnesium as a 10% to 20% solution of magnesium sulfate given over five to ten minutes by either continuous intravenous infusion or

TABLE 1
CAUSES OF MAGNESIUM DEPLETION

A. *Decreased intake*
    1. Starvation
    2. Prolonged intravenous therapy
B. *Decreased intestinal absorption*
    1. Malabsorption syndromes
    2. Surgical resection of small intestine
C. *Increased intestinal losses*
    1. Prolonged nasogastric suction
    2. Laxative abuse
    3. Diarrhea
D. *Increased urinary losses*
    1. Diuretic therapy
    2. Diabetes mellitus
    3. Hyperparathyroidism
    4. Renal tubular acidosis
    5. Hyperaldosteronism
E. *Transcellular shift of magnesium**
    1. Insulin therapy†
    2. Respiratory alkalosis
F. *Multiple causes*
    1. Diabetic ketoacidosis
    2. Alcohol withdrawal

* Total body magnesium content may be normal.
† Particularly during therapy of diabetic ketoacidosis.

TABLE 2
MANIFESTATIONS OF MAGNESIUM DEFICIENCY

A. *Neurologic*
    1. Tremors
    2. Vertigo
    3. Depression
    4. Irritability
    5. Psychotic behavior
    6. Tetany
B. *Cardiovascular*
    1. Supraventricular arrhythmias
    2. Ventricular arrhythmias

TABLE 3
LABORATORY FINDINGS IN MAGNESIUM DEPLETION

A. Hypocalcemia, hypokalemia
B. Hypophosphatemia, occasional hyperphosphatemia
C. Electrocardiographic abnormalities
    1. Nonspecific S-T segment abnormalities
    2. Deceased amplitude of T waves
    3. Prolongation of QT segment

TABLE 4
PREVENTION OF HYPOMAGNESEMIA

A. In patients on prolonged intravenous therapy add 1 to 2 gm of magnesium sulfate (8 to 16 mEq magnesium) to the daily fluid requirement.

TABLE 5
EMERGENCY TREATMENT OF MAGNESIUM DEFICIENCY[3, 6, 7]

Alcoholic withdrawal seizures	4 gm (33 mEq) $MgSO_4$* As a 10% to 20% solution over 5-10'' intravenously. Then treat as in Table 6.
Ventricular arrhythmias	2 gm (16 mEq) $MgSO_4$ As a 10% to 20% solution over 5-10'' intravenously. Then treat as in Table 6.

* Each magnesium sulfate molecule contains 8.1 mEq/gm.

TABLE 6
SUGGESTED DOSAGE SCHEDULE FOR TREATMENT OF MAGNESIUM DEPLETION[3, 6, 7]

Route	*Day*	*Dose*
Intramuscular (50% $MgSO_4$ solution)	1	2 gm (16.3 mEq) every 2 hours × 3 doses then 1 gm (8.1 mEq) every 4 hours × 4 doses
	2	1 gm (8.1 mEq) every 4 hours × 6 doses
	3-5	1 gm (8.1 mEq) every 6 hours
Intravenous (≤ 20% $MgSO_4$ solution only	1	6 gm (49 mEq) in 1,000cc of desired IV solution to be infused over three hours then 5 gm (41 mEq) in each of two 1 liter solutions, to be infused over the day
	2-5	6 gm (49 mEq) distributed equally in the total fluids of the day

intramuscular administration. Therapy then should be continued as described in Table 6 until replacement is complete.

Ventricular arrhythmias should be treated with 2 gm (16 mEq) of magnesium sulfate as a 10% to 20% solution over five to ten minutes followed by therapy described in Table 6 until magnesium replenishment is achieved. Intravenous magnesium sulfate should not be given as a 50% solution. A 20 ml dose of 20% solution (4 gm) can be made by mixing 8 ml of 50% magnesium sulfate solution and 12 ml of sterile distilled water.[3] Magnesium sulfate should not be infused more rapidly than 1 mEq/min. Magnesium-deficient patients generally require 1 to 2 mEq/kg for parenteral replacement. Replacement should occur over a three- to five-day period as outlined in Table 6 except in emergency conditions.

Renal function must be ascertained prior to the initiation of magnesium therapy. Renal insufficiency does not contraindicate therapy but necessitates modification of dosage. Serum magnesium levels should be monitored frequently during therapy. A clinical clue to an elevated magnesium concentration is a decrease in deep tendon reflexes. In addition, there is no advantage to intravenous over intramuscular magnesium therapy so that the intramuscular route should be utilized except in emergency situations.

Summary

Only recently has magnesium balance been shown to have clinical relevance. Although there are numerous causes of magnesium deficiency, clinical manifestations and laboratory findings are nonspecific and mainly reflect neurologic and cardiac irritability. Rapid treatment is required for the emergencies of ventricular arrhythmias or the seizures of alcohol withdrawal. A slower pace is suitable for replacement therapy. Guidelines for treatment are presented.

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Obstructive Sleep Apnea Syndrome

(Continued from page 23)

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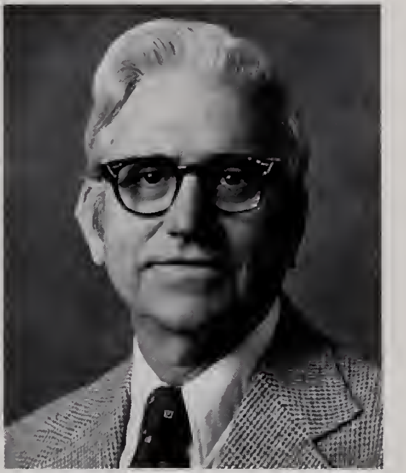
President's Message

Nurses

Physicians and nurses have been partners in health care for many years. Obviously, it would be extremely difficult for any physician to practice medicine in his office or the hospital without the assistance of a nurse. The patients, of course, benefit from this special professional doctor-nurse working relationship.

Unfortunately, problems are now arising. The Nurses Act that became effective approximately four years ago has changed the interpretation of the practice of nursing to an extent yet to be determined. Some physicians feel that its assessment of the practice of nursing is comparable to that of the practice of medicine. Some interpretations by attorneys general have "frightened" many nurses in regard to their responsibilities related to coronary care and intensive care units where critical care often becomes their personal responsibility, although under detailed written orders of the physician in charge. It would seem that this Act could be clarified by simple corrections in the wording of this law.



Eugene T. Hansbrough, M.D.

The physician-nurse association has always been excellent on the local level. On the state level, however, we have not mutually considered the problems that have come before us to present a unified front. At the request of the Missouri Nurses Association several years ago, the MSMA Executive Committee met with a committee of nurse practitioners and trainers of nurse practitioners from the Missouri Nurses Association. However, I feel that those meetings were not productive.

Consequently, I recently contacted the president of the Missouri Nurses Association with the request that the MSMA Executive Committee meet with the elected directors of that association to consider joint action on our mutual problems, especially in the field of legislation. I am convinced that we can achieve the same cooperative attitude on the state level that we have enjoyed on the local level simply by avoiding consideration of minor problems between the professions that discussion will not change.

MSMA Auxiliary

Annual Benefit Auction IV

COME ONE, COME ALL to our Fourth Annual Benefit Auction for the American Medical Association Education Research Foundation and the Missouri State Medical Foundation. Auction IV will be held on Thursday, April 1 at 6:30 PM during the Annual Session at the Hyatt Regency Hotel in Kansas City.

Mrs. Jerry Meyer
President

The theme this year will be a "Royal Evening" and there will be professional auctioneers, "celebrity" auctioneers and special guests for the festivities.

YOUR HELP is needed to make this project a real success. You can help in three ways: (1) by donating sale items through your county medical society or auxiliary, (2) by donating items as an individual and, most important of all, (3) by attending and bidding on items at the auction.

Considering the increasing cost of a medical education, your contribution to the AMA-ERF will be appreciated by the medical school deans. Even though the AMA-ERF cannot lend funds to medical students at the present time, Missouri's medical schools can use the AMA-ERF money as undesignated funds. There are many items that do not fall into the usual categories already available to them, so this undesignated money is an important help.

If you prefer that your donations be used specifically for medical students' education, your MSMF is available to extend loans to Missouri residents whatever the school of their choice.

Your MSMF provides student loans at a lower interest rate and repayment is not required until one year after the physician has initiated his or her private practice of medicine.

As you know, the goal of the MSMA Foundation is to make funds available to those men and women who otherwise may not be able to study medicine.

Donations may be to either foundation at any time, but the Auxiliary's Benefit Auction provides a special opportunity. Please select the item you wish to donate now and notify your county auxiliary president; Mrs. A. J. Campbell, 1500 W. 16th, Sedalia 65301 (816-826-2111); Mrs. Clyde V. Martin, 5531 E. Mission Dr., Shawnee Mission, KS 66208 (913-677-3267); or Ms. Jean Duensing, c/o MSMA, 113 Madison, P.O. Box 1028, Jefferson City 65102 (314-636-5151).

Preliminary Program

MISSOURI STATE MEDICAL ASSOCIATION

124th Annual Session

Hyatt Regency Hotel, Kansas City **April 1-4, 1982**

THURSDAY, APRIL 1

8:00 AM Registration of Delegates. First Floor South.

10:30 AM House of Delegates, Opening Session. Regency New York A and B Rooms.

12:00 NOON Jackson County Medical Society Luncheon. Empire C Room.

12:00 NOON St. Louis Metropolitan Medical Society Luncheon. Chouteau A & B Rooms.

1:00 PM Reference Committee Meetings.

5:30-6:30 PM Reception honoring MSMA President-Elect. Regency San Francisco A Room.

6:30 PM Missouri State Surgical Society Board of Directors. Cocktails and Dinner. Chouteau A Room.

6:30 PM MSMA Auxiliary Auction. Regency Atlanta B Room.

FRIDAY, APRIL 2

7:00 AM Councilor District Breakfasts.

7:15-11:00 AM Complimentary Coffee and Rolls. Exhibit Area.

8:00 AM Registration. First Floor South.

8:30 AM Missouri University Board of Directors. Breakfast and Meeting. Northrup Room.

9:00-10:30 AM General Session. Regency New York A Room.
Introductions: E. T. Hansbrough, M.D., Poplar Bluff, MSMA President
Speaker:
"The Historical Background of Where American Medicine Is Today – and How It Got There." Wilfred E. Wooldridge, M.D., Springfield, Editor, Missouri Medicine.

10:30 AM MOMEDICO Stockholders and Board of Directors Meeting. Empire A Room.

10:30 AM Intermission to view exhibits.

11:00 AM-12:30 PM *"Cystic Fibrosis — An Adult Disease"* (Annual Charles A. Brasher, M.D. Lectureship). Van Horn C Room.
Speaker: Giulio J. Barbero, M.D., Chairman, Department of Child Health, University of Missouri-Columbia.
Sponsored by the Missouri Thoracic Society.

11:00 AM-12:30 PM *Scientific Session*. Sponsored by the Missouri State Surgical Society. Benton A and B Rooms.

11:00 AM-12:30 PM *Scientific Session*. Sponsored by the Missouri Orthopaedic Association. Fremont Room.

11:00 AM-12:30 PM *Scientific Session*. Sponsored by the Missouri Society of Internal Medicine. Van Horn B Room.

12 NOON Jackson County Medical Society Luncheon. Empire C Room.

12:30 PM Missouri University Medical Alumni Luncheon. Regency Chicago A Room.

12:30 PM Missouri Thoracic Society Luncheon. Van Horn A Room.

1:00-5:00 PM *Scientific Session*. Sponsored by the Missouri Psychiatric Association. Fremont Room.

1:00 PM *Scientific Session*. Sponsored by the Missouri Chapter, American College of Emergency Physicians. Northrup Room.
Organizational Meeting of Emergency Physicians to follow Scientific Session.

2:00 PM St. Louis Metropolitan Medical Society Caucus. Chouteau A and B Rooms.

2:00-3:30 PM *Scientific Session*. Sponsored by the Missouri Society of Pathologists. Van Horn C Room.

2:00-3:30 PM *Scientific Session*. Sponsored by the Missouri Society of Internal Medicine. Van Horn B Room.

2:00-
3:30 PM *Scientific Session*. Sponsored by the Missouri State Surgical Society. Benton A and B Rooms.
Business Meeting of Surgical Society to follow Scientific Session.

2:30-
4:00 PM Missouri State Medical Foundation Annual Meeting. Regency New York A and B Rooms.

3:30 PM Intermission to view exhibits.

4:00 PM **House of Delegates, Second Session.** Regency New York A and B. Rooms.

5:00-
6:30 PM Reception Honoring Incoming MSMA Auxiliary President. Regency Atlanta A Room.

6:30 PM Missouri State Surgical Society Cocktails and Dinner. Chouteau A Room.

6:00 PM Reference Committee Meetings.

6:30 PM Missouri Psychiatric Association. Business Meeting, Cocktails and Dinner. Empire C Room.

6:30 PM Missouri Society of Pathologists. Cocktails and Dinner. Empire A Room.

7:00 PM Missouri Dermatological Society. Cocktails and Dinner. Fremont Room.

7:30 PM Missouri Ophthalmological Society, Inc. Board of Directors Meeting and Dinner. Northrup Room.

SATURDAY, APRIL 3

7:30 AM MSMA Auxiliary Public Affairs Breakfast. Regency New York A Room.

7:30 AM Missouri Ear, Nose and Throat Association Breakfast and Business Meeting. Van Horn B Room.

7:30 AM Missouri Society of Anesthesiologists Breakfast. Empire A Room.

8:00 AM Registration. First Floor South.

8:00 AM *Scientific Session*. Sponsored by the Missouri OB/GYN Society. Crown Center Hotel.

8:00 AM *Welcome Statement*. Robert Kretzschmar, M.D., Truman Medical Center, Kansas City.

- 8:15 AM *History of the Pap Smear*.
  Speaker: George E. Volk, M.D., President, Missouri OB-GYN Society, Kansas City.
- 9:00 AM *Interesting Series of Pap Smears*.
  Speaker: Othello Dale Smith, M.D., Baptist Hospital, Kansas City.

9:30 AM Coffee Break.

10:30 AM *Scientific Session*. (Continued)

- 10:00 AM *Conization of the Cervix*. Speaker: George E. Volk, M.D.
- 10:20 AM *Laser Physics*. Speaker: James H. Goodson, M.D., Dallas Tex.
- 11:05 AM *Series of Laser Patients*. Speaker: Robert Slickman, M.D., Kansas City.
- 11:30 AM-
  12:15 PM CO_2 Laser in Infertility. Speaker: Steven Taylor, M.D., New Orleans, La.

8:00-
11:00 AM Complimentary Coffee and Rolls. Exhibit Area.

8:30-
12:00 NOON *Scientific Session*. Sponsored by the Missouri Society of Anesthesiologists. Empire B Room.

- 8:30 AM *Recent Advances In Respiratory Care*. Speaker: H. Michael Marsh, M.D., Director, Respiratory Intensive Care Unit, Mayo Clinic, Rochester, Minn.
- 9:15 AM *Respiratory Care for Open Heart Patients*. Speaker: H. Michael Marsh, M.D.
- 10:00 AM *Medical Aspects of Care for Patients with Heart Disease*. Speaker: Bernard Levi, M.D., Director, Cardiovascular Laboratory, Menorah Medical Center, Kansas City.
- 10:45 AM Round Table Discussion — *The Role of an Anesthesiologist in the ICU*.
  James Malow, M.D., Chairman, Department of Anesthesiology,
  St. Joseph Hospital, Kansas City.
  Peter Mestad, M.D., Director, Department of Anesthesiology,
  Children's Mercy Hospital, Kansas City.
  H. Michael Marsh, M.D.

9:00-
12:00 NOON *Scientific Session*. Sponsored by the Missouri State Allergy Association, Missouri Dermatological Society and the Missouri Academy of Pediatrics. Chouteau Room.

(Continued on page 31)

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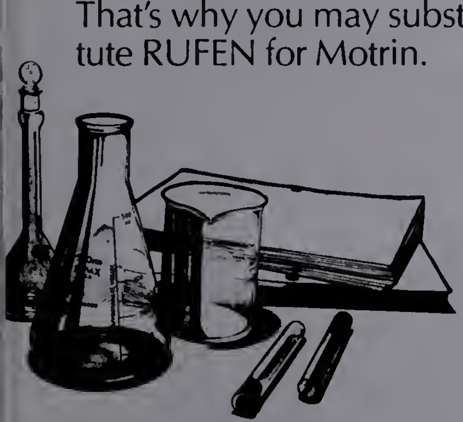

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[*] Data on file.

[†] Contributions made to: International League Against Rheumatism.

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I hope we've given you several good reasons to remember RUFEN the next time you prescribe ibuprofen.

If we haven't, or if you'd like to know more about Boots Pharmaceuticals or this program, please don't hesitate to drop me a line. Or call us directly at our toll-free number: (800) 551-8119. Louisiana residents, call (800) 282-8671.

To ensure that your patients receive the benefits of the Rufen program, *be sure to specify* "D.A.W.," "No Sub," or "Medically Necessary," as required by the laws of your state.

Sincerely,

John D. Bryer, President
Boots Pharmaceuticals, Inc.

Boots Pharmaceuticals, Inc.
6540 LINE AVENUE, SHREVEPORT, LOUISIANA 71106

Pioneers in medicine for the family

*Data on file.

5/81

RF-009

RUFEN®
(ibuprofen/Boots)

(For full prescribing information, see package brochure.)

RUFEN® Tablets
(Ibuprofen)

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally; however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS

Incidence greater than 1%

Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4% to 16%). Includes nausea•, epigastric pain•, heartburn•, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). **Central Nervous System:** dizziness•, headache, nervousness. **Dermatologic:** rash* (including maculopapular type), pruritus. **Special Senses:** tinnitus. **Metabolic:** decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

•Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** depression, insomnia. **Dermatologic:** vesiculobullous eruptions, urticaria, erythema multiforme. **Special Senses:** amblyopia (see PRECAUTIONS). **Hematologic:** leukopenia, decreased hemoglobin and hematocrit. **Cardiovascular:** congestive heart failure in patients with marginal cardiac function, elevated blood pressure.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** paresthesias, hallucinations, dream abnormalities. **Dermatologic:** alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** hemolytic anemia, thrombocytopenia, granulocytopenia bleeding episodes. **Allergic:** fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** gynecomastia, hypoglycemia. **Cardiovascular:** arrhythmias (Sinus tachycardia, bradycardia, and palpitations). **Renal:** decreased creatinine clearance, polyuria, azotemia.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain. Do not exceed 2,400 mg per day.

CAUTION: Federal law prohibits dispensing without prescription.

Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

9:00 AM *Hymenoptera Sensitivity*. Speaker: David B. K. Golden, M.D., Assistant Professor of Medicine, Johns Hopkins University, Baltimore, Md.

9:40 AM *Insulin Allergy and Insulin Resistance*. Speaker: Leonard Cohen, M.D., Fellow, Barnes Hospital, St. Louis.

10:00 AM Coffee Break.

Scientific Session. (Continued)

10:20 AM *Urticaria and Its Unusual Aspects*. Speaker: David B. K. Golden, M.D.

11:20-11:40 AM Panel Discussion. Panelists: David B. K. Golden, M.D.
Leonard Cohen, M.D.
Joseph Anderson, M.D.

9:00-10:30 AM *Scientific Session*. Sponsored by the Missouri Ophthalmological Society, Inc., Benton A Room

9:00-10:30 AM *Scientific Session*. Sponsored by the Missouri Ear, Nose and Throat Association. Van Horn C Room

9:00-10:30 AM *Scientific Session*. Sponsored by the American Heart Association, Missouri Affiliate, Inc. Van Horn A Room

9:00-10:30 AM American Cancer Society, Missouri Division, Inc. Benton B Room.

9:00 AM-12:00 NOON American Medical Women's Association Workshops. Van Horn B Room.

9:30 AM **Meet Your AMA Delegates.** Conference Room.

9:30 AM-12:00 NOON Scientific Session. Sponsored by Physical Medicine and Rehabilitation. Northrup Room.

10:00-11:30 AM Missouri Radiological Society Board of Directors Meeting. Empire C Room.

10:30 AM Intermission to view exhibits.

10:30 AM-5:00 PM Missouri Ophthalmological Society, Inc. All Day Meeting. Benton A Room.

11:00 AM-12:30 PM *Scientific Session*. Sponsored by the Missouri Academy of Family Physicians. Fremont Room.

11:30 AM Missouri Radiological Society Board of Directors Luncheon. Empire C Room.

12:00 NOON American Medical Women's Association Luncheon. Regency Chicago C Room.

12:00 NOON Missouri State Neurological Society Luncheon. Board Meeting. Regency Chicago B Room.

12:00 NOON Physical Medicine and Rehabilitation Luncheon, Business and Board Meeting. Van Horn C Room.

12:00 NOON Missouri State Allergy Association Luncheon. Chouteau B Room.

12:00 NOON-1:00 PM Missouri Ophthalmological Society, Inc. Luncheon. Benton B Room.

12:00 NOON Missouri Society of Anesthesiologists Luncheon and Business Meeting. Empire A Room.

12:30 PM Fifty-Year Club Luncheon. Van Horn A Room.

12:30 PM Missouri OB-GYN Society Luncheon and Business Meeting. Regency San Francisco B Room.

1:00-4:15 PM *Scientific Session*. Sponsored by the Missouri Radiological Society. Regency San Francisco A Room.

2:00-3:30 PM *Scientific Session*. Sponsored by the Missouri Academy of Family Physicians. Fremont Room.

2:00-3:30 PM *Scientific Session*. Sponsored by the Missouri State Surgical Society. Benton B Room.

2:00-3:45 PM *Scientific Session*. Sponsored by the Missouri State Allergy Association, Missouri Dermatological Society and the Missouri Academy of Pediatrics. Chouteau A Room.

2:00 PM *Dermatology and Allergic Diseases*. Speaker: Larry Millikan, M.D., Tulane University, New Orleans, La.

3:20 PM Panel Discussion.

3:45 PM Missouri State Allergy Association Business Meeting.

2:00-
4:30 PM *Scientific Session*. Sponsored by the Missouri Society of Anesthesiologists. Empire B Room.
2:00 PM *Mayo Clinic's Experience in Pain Management*. Speaker: Lee Nauss, M.D., Co-Director, Pain Clinic, Mayo Clinic, Rochester, Minn.
2:45 PM *Pain Management in a Community Hospital Setting* Speaker: George Hoech, M.D., Kansas City.
3:30 PM Round Table Discussion: *The Role of the Anesthesiologist in Pain Management*.
Kurt Krueger, M.D.
Steven Waldman, M.D., Director, Pain Clinic, Menorah Medical Center, Kansas City
Lee Nauss, M.D.
George Hoech, M.D.

5:00-
6:30 PM Missouri University Alumni Reception. Regency Chicago A Room.
5:00-
6:30 PM St. Louis University Alumni Reception. Chouteau A and B Rooms.
5:00-
6:30 PM Washington University Alumni Reception. Regency San Francisco B Room.
6:30 PM MSMA Social Hour preceding Annual Banquet. Regency Foyer.
7:15 PM MSMA Annual Banquet. Regency New York A and B Rooms.

SUNDAY, APRIL 4

7:30 AM HOUSE OF DELEGATES BREAKFAST AND FINAL SESSION. Regency New York A and B Rooms.

Preliminary Program — 57th Annual Convention

MSMA AUXILIARY

Hyatt Regency Hotel, Kansas City April 1-3, 1982

Thursday, April 1

10:00 AM-4:00 PM Registration and Information. Regency Foyer.
10:00 AM Auxiliary Report to the MSMA House of Delegates.
Mrs. Jerry Meyer, President
12:00 NOON Finance Committee Meeting. President's Suite.
1:00-5:00 PM Auction items to be taken to Regency Atlanta Room.
3:30 PM Pre-Convention Board Meeting. Chouteau B.
6:30 PM Fourth Annual Benefit Auction of the AMA-ERF and MSMF. Regency Atlanta-B.

Friday, April 2

7:15-11:30 AM MSMA Complimentary Coffee and Rolls. Exhibit Area.
8:00 AM-NOON Registration and Information. Regency Foyer.
8:00 AM General Assembly-Business Meeting. Regency Atlanta-B.
Keynote Address: Mrs. Torrence Payne, Newburgh, N.Y., President-Elect of the AMA Auxiliary.
12:00 NOON Bus to Awards Luncheon at the Alameda Plaza.
5:30-7:00 PM Reception honoring Mrs. Sam Gaston, Joplin, MSMA Auxiliary President-Elect. Regency Atlanta-A.
6:30 PM Dutch Treat Dinner (TBA).

Saturday, April 3

7:30 AM Public Affairs Breakfast. Regency New York A Room.
8:00 AM-NOON Registration and Information. Regency Foyer.
9:00 AM General Assembly — Workshop. Regency Atlanta.
Greetings from Southern Medical Association, Mrs. Keith D. Jones, Warrensburg, President.
12:00 NOON Installation Luncheon. Regency Atlanta-A.
2:00 PM Post-Convention Board Meeting. Regency Atlanta-B.
6:30 PM Social Hour. Regency Foyer.
7:15 PM MSMA Annual Banquet. Regency New York.

Report of the MSMA Committee on Constitution and Bylaws (A-82)

In accordance with Article VII of the Constitution of the Missouri State Medical Association, the Committee on Constitution and Bylaws submits the following changes for consideration by the MSMA House of Delegates at the April, 1982, Annual Session.

In reviewing the Constitution and Bylaws, the Committee became aware of a confusing situation whereby the word "session" is used to denote both the Association's annual meeting and the meetings of the House during the annual meeting. This has led to some problems, according to the Speaker of the House, so the Committee proposes that the annual meeting of the Association be termed the "Annual Convention" and that the gatherings of the House of Delegates during the Annual Convention be termed "Sessions." Most of the changes listed below concern this differentiation.

Other changes proposed by the Committee include a rewording of Bylaws Chapter III, Section 1 (a) to clarify requirement for introduction of resolutions; a renumbering of various Sections in Bylaws Chapters III and IV; deletion of some redundant language in Chapter II, Section 3, Chapter III, Section 1(a) and Chapter V, Section 5 and a few minor editorial changes.

The changes in Article VI and Article XI of the Constitution will be placed before the House in 1982 for final vote in 1983.

In reprinting the entire Constitution and Bylaws of the Association, new language is underlined while deleted language is bracketed.

Robert R. MacDonald, *Chairman*
Kirby L. Turner
Roy Gillispie
Miles C. Whitener
R. Stacy Long

Constitution

Article I. Name of the Association

The name and title of this organization shall be the Missouri State Medical Association.

Article II. Purpose

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

Article III. Membership

Membership in this Association shall be limited to and include all members in good standing in component societies which hold charters from this Association.

Article IV. House of Delegates

The House of Delegates shall be the legislative body of this Association and shall consist of delegates elected by the component societies as well as all Past-Presidents of the Association, the Speaker and Vice-Speaker, who will serve as Delegates-at-Large. It shall elect a Speaker and Vice-Speaker from its body. Its Secretary shall be the Secretary of the Missouri State Medical Association.

Article V. Council

The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District, and a duly elected medical student Councilor. A majority of voting members of the Council shall constitute a quorum.

Article VI. Sessions and Meetings

Section 1. The Association shall hold an annual Spring [session] Convention of the House of Delegates, at places fixed by the House of Delegates, the time of which shall be fixed by the Council. During the Annual Convention, the House shall hold at least three sessions.

Sec. 2. Special meetings of the Association or the House of Delegates may be called by a two-thirds vote of the Council and shall be called upon a petition signed by members equal in number to one third of the total number of delegates certified for the last Annual [Session.] Convention.

Article VII. Officers

Section 1. The Officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, a Speaker and a Vice-Speaker of the House of Delegates and Councilors selected as provided for.

Sec. 2. The Officers shall be elected annually. The term of Councilors and Vice-Councilors shall be two years, except for the duly elected medical student Councilor who shall be elected for a one-year term. Half of the membership of the Council shall be elected each year. The Secretary and Treasurer shall be elected by the Council from the general membership. The delegates present from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilors and Vice-Councilor from that district. The Delegates from the medical school component societies shall meet prior to the last day of the Annual Session and elect a medical student Councilor and Vice-Councilor. In the event of death, resignation or removal of any Councilor, the Vice-

Councilor shall automatically fill the vacancy. The officers shall serve until their successors are elected and installed.

ARTICLE VIII. FUNDS, EXPENSES AND BUDGET

Funds shall be raised by a per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates. Funds may also be raised in any other manner approved by the House of Delegates. The Council shall submit an annual budget to the House of Delegates. All resolutions providing for appropriations shall be referred to the Council and all appropriations approved by the Council shall be included in the annual budget.

ARTICLE IX. REFERENDUM

At any General Meeting of the Association, it may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote. A majority vote of all members of the Association shall determine the question.

Petitions signed by 10% of the active members of the Association, including petitioners representing at least one half of the component Medical Societies, will initiate a referendum regarding changes in the Constitution and Bylaws or questions before the House of Delegates. A two-thirds vote of all active members of the Association responding will determine the question.

ARTICLE X. SEAL

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XI. AMENDMENTS

The House of Delegates may amend any article of the constitution by a two-thirds vote of the delegates present and voting in any Annual [or Interim Session,] Convention, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

Bylaws

CHAPTER I. MEMBERSHIP

Section 1. Members of this Association shall be those individuals whose names have been certified by secretaries of component societies to the Secretary of this Association that they are duly elected members of a component society and are legally qualified physicians practicing in Missouri except as otherwise provided. Each member must be of good moral and professional standing, and must not support, nor practice, nor claim to practice any exclusive system of medicine.

Sec. 2. No person who is under sentence of suspension or expulsion from any component society of this Association or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Association.

Sec. 3. There shall be four classes of members as follows:

Active members shall be limited to those members of component societies who (1) hold the degree of Doctor of Medicine or Bachelor of Medicine, and (2) if permitted by the bylaws of the component society, members who hold the degree of Doctor of Osteopathy, and (3) are entitled to exercise the rights of active membership in their component societies, as determined by their component societies, subject to the provisions of these Bylaws.

Junior members shall be limited to those members of component societies who are serving a full-time [training internship or residency] postgraduate training program in a hospital approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Student Members shall be limited to those members of component societies who are pursuing a course of study leading to the degree of Doctor of Medicine in a medical school approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Honor members shall be limited to Honor members of component societies, which societies have requested that active members who have reached advanced years and have long served the Association and the profession be made Honor members of the Association. They shall enjoy all the privileges of active membership and shall be exempt from the payment of dues.

CHAPTER II. GENERAL MEETINGS

Section 1. The General Meetings shall be open to all registered members and guests.

Sec. 2. Any paper read before this Association shall be considered for publication in the Journal if the author so desires. Such papers may be given publication priority over regularly submitted papers but shall be subject to the same editorial review and selection policies.

Sec. 3. No person in the active practice of medicine in the State of Missouri shall appear on the program of the Association unless he or she is a member of the Missouri State Medical Association [or an affiliated association or organization.]

CHAPTER III. HOUSE OF DELEGATES

Section 1 [a]. The House of Delegates shall meet annually at the time and place of the Annual [Session] Convention. [It shall remain in continuous session on the first day of the Annual Session and complete the work coming before it at that session.]

All resolutions to be considered by the House of Delegates must be received at the Association office 45 days prior to the opening session of the House for publication in the handbook. Any resolution to be introduced at the opening session [after that time] must be made available to the House of Delegates 24 hours before the opening session [in which it is to be introduced]. These will be accepted as business of the House at the Opening Session and will be referred to an appropriate Reference Committee. Resolutions introduced at the Opening Session but which did not meet the 24-hour deadline will be referred to a Reference Committee only if approved by two thirds of the Delegates voting. Sufficient copies of the resolution or funding for same must be supplied by the individual or society introducing the resolution.

At the second session of the House of Delegates [, the same procedure would be followed, but such] introduction of Resolutions would be allowed only if approved by two thirds of the delegates voting. The House of Delegates shall meet on the last day of the [annual session] Annual Convention to receive the report of the Nominating Committee and complete unfinished business and the election of officers. The same procedure with regard to resolutions would be followed at that session, but it would then take a unanimous vote of the House to allow such introduction. At the discretion of the Speaker, these conditions would not apply for resolutions of good wishes, condolences, congratulations and others of a personal nature.

Sec. 2. Delegates to the House of Delegates shall be allotted according to the following formula:

(a). Each component society shall be entitled to send each year one delegate or one alternate for each 25 full paid members or fraction thereof in the Association on December 31 of the previous year.

(b). One additional delegate or alternate is allowed for each 100 members or major fraction thereof as of December 31 of the previous year.

(c). When a component society's full paid membership as of December 31 of the previous year reaches 1,000, that society shall be entitled to 30 additional delegates or alternates.

(d). When a component society's full paid membership as of December 31 of the previous year reaches 2,000, that society shall be entitled to an additional 50 delegates or alternates.

(e). Each component society which is composed of two or more counties shall be entitled to at least one delegate from each of the counties having one or more member physicians practicing in the county of which the component society is composed; however, such delegates from multi-county component societies must practice or reside in the county they represent. Alternate delegates may be elected from the entire membership of the component medical societies.

(f). All Past-Presidents of the Association, the Speaker and Vice-Speaker shall serve as Delegates-at-Large.

(g). Only duly elected delegates have the privilege of the floor at meetings of the House of Delegates. However, any delegate may request the privilege of the floor for any other individual, which privilege may be granted or denied by the speaker, subject to disapproval by a majority vote of the House of Delegates.

[Sec. 2A.] Sec. 3. Each Medical School Component Society shall be entitled to send each year two delegates, elected by the component society, to the House of Delegates at the Annual [Session] Convention. Each delegate shall be a member in good standing with this Association and the Component Medical Society. Such student delegates shall enjoy all the rights and privileges of all other delegates.

[Sec. 3.] Sec. 4. Forty delegates shall constitute a quorum of the House of Delegates. All meetings of the House of Delegates shall be open to members of the Association.

[Sec. 4.] Sec. 5. From among members of the House of Delegates, the Speaker shall appoint reference committees to which reports and resolutions, on a majority vote of the House of Delegates, shall be referred as follows:

Reference Committee on Amendments to the Constitution and Bylaws.

Reference Committee on Resolutions.

Reference Committee on Miscellaneous Affairs.

Reference Committee on Medical Education and Public Welfare.

Reference Committee on Reports of Officers.

The Speaker may appoint such other reference committees as he may deem necessary, upon approval of the House of Delegates.

The President shall appoint a Committee on Credentials.

[Sec. 5.] Sec. 6. The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

[Sec. 6.] Sec. 7. The House of Delegates shall divide the state into Councilor Districts specifying which counties each district shall include and, when the best interest of the Association and the profession will be promoted thereby, organize in each a district medical society of which all members of the component societies shall be members.

[Sec. 7.] Sec. 8. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate on their reports.

[Sec. 8.] Sec. 9. The House of Delegates shall receive and act upon a complete and detailed annual audit of receipts and expenses of the preceding year and a proposed budget for the current calendar year which shall have been prepared by the Council and submitted to the component societies at least four weeks prior to the Annual [Session] Convention. These shall be published in the Journal.

[Sec. 9.] Sec. 10. The following shall be the general order of business of the House of Delegates for the first [meeting] session of the [session] convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Report of officers.
6. Report of committees.
7. Unfinished business.
8. New business.

The following shall be the general order of business of the House of Delegates for the last [meeting of the] session of the Convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Report of the Nominating Committee.
6. Election of officers.
7. Reports of officers.
8. Reports of committees.
9. Unfinished business.
10. New business (see Sec. 1, Chap. III).
11. Installation of officers.
12. President's appointments and installation of members to committees.
13. Selection of the place for the next Annual [Session] Convention.

At any [meeting] session of the House of Delegates, the order of business may be changed by a two-thirds affirmative vote of the members present and voting.

Chapter IV. Election of Officers

Section 1. The President, on the first day of the Annual [Session] Convention, shall select a Committee on Nominations consisting of eleven delegates, one from each Councilor District and one from a Medical School component society. The Committee on Nominations shall determine that proposed candidates for office are qualified and willing to serve and shall report to the House of Delegates in the form of a ticket containing the names of one or more members for each of the offices listed in Article VII of the Constitution, which are to be filled at the Annual [Session] Convention, excepting the Secretary and Treasurer who are elected by the Council from the general membership.

Sec. 2. All elections shall be by written ballot. A majority of the votes cast shall be necessary to elect.

Delegates and Alternates for the American Medical Association shall be elected as follows:

The Nominating Committee shall propose one or more candidates for each delegate position for a full two-year term, one or more candidates for each alternate position for a full two-year term, and one or more names for each unexpired position.

When a nomination for AMA delegate term is contested, the AMA delegates shall be elected by ballot. Each MSMA delegate may have one vote for each delegate to be elected and each vote shall be cast for a different nominee. A nominee is elected if he receives votes on the majority of the ballots cast and has the highest number of votes cast for that position. If all vacancies for AMA delegates are not filled on the first ballot, then subsequent ballots will be taken with the nominee receiving the fewest number of votes cast in each subsequent ballot dropping out of consideration on the next ballot and each MSMA delegate casting one vote for each position available in each subsequent ballot until one nominee for each position is elected.

The election for AMA alternates and an election to fill an unexpired term will be conducted in the same manner.

In case no nominee for general offices of the Association (see Article VII, Constitution) receives a majority of the votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 3. Nothing in this chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Sec. 4. Delegates present at the Annual [Session] Convention from Councilor Districts whose Councilors' and Vice-Councilor's terms expire shall hold meetings on or before the morning of the last day of the Annual [Session] Convention and elect Councilors and a Vice-Councilor for their districts for a term of two years. The names of the elected Councilors and Vice-Councilor shall be given on prescribed forms to the Secretary for presentation to the House of Delegates. Each candidate for Councilor or Vice-Councilor must reside or practice in the district for which he is elected.

[Sec. 4A.] Sec. 5. Each Councilor District shall be entitled to one Councilor for each 400 full paid members or portion thereof as of December 31 of the preceding year. Each District shall be entitled to one Vice-Councilor.

[Sec. 4B.] Sec. 6. Delegates from the four Medical School Component Societies shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the medical student component societies shall serve on an annual renewable basis.

[Sec. 5.] Sec. 7. The Speaker and Vice-Speaker shall not serve more than three consecutive terms.

[Sec. 6.] Sec. 8. The Speaker shall appoint a parliamentarian to serve as such during the sessions of the House of Delegates at each Annual [Session] Convention and upon whom the Speaker may call before deciding points of order or procedure.

Chapter V. Duties of Officers

Section 1. The **President,** or his designated representative, shall preside at all scientific sessions of the Association. He shall preside at the House of Delegates in the absence of the Speaker or Vice-Speaker and until their successors are elected. He shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such other duties as custom or parliamentary usage requires. He shall be the real head of the profession of the state and assist the Councilors in building up the component societies and in making their work more practical and useful.

Sec. 2. The **President** and the **President-Elect** shall be members of the Council and shall attend all meetings of the Council. The President-Elect shall assume the office of the President at the Annual [Session] Convention following his election to the position of President-Elect. Should the office of President-Elect become vacant through death or otherwise, the Council may fill the vacancy by appointment until the next Annual [Session] Convention.

Sec. 3. The **Vice-Presidents** shall assist the President in the discharge of his duties. Prior to the meeting of the Nominating Committee, the President-Elect shall recommend to the Nominating Committee the name of a member to serve as First Vice-President. In the event of the death, resignation, or removal of the President, the First Vice-President shall serve as President for the unexpired term.

Sec. 4. The **Treasurer** shall give bond in the sum of $50,000. He shall demand and receive all funds due the Association, together with bequests and donations. Money shall be paid out of the treasury only on the written order of the President and Secretary, the President and Treasurer or the Treasurer and Secretary. The Treasurer shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his actions and of the state of the funds in his hands.

Sec. 5. The **Secretary** shall attend the General Meetings of the Association and the [meetings] sessions of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be Secretary of the Council and shall keep a record of its proceedings. He shall be the custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association that come into his hands. He shall provide for the registration of the members and delegates at the Annual [Session] Convention. He shall, with the cooperation of the secretaries of the component societies, keep a register of all the legal practitioners of the state by counties, noting on each his status in relation to his component society, and shall transmit a copy of this list to the American Medical Association, transmitting to its Secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council and shall make an annual report to the House of Delegates. He shall supply all component societies with the necessary blanks for making their reports and shall collect from them the regular per capita dues and assessments and turn the same over to the Treasurer. [The amount of his salary shall be fixed by the Council.]

Chapter VI. Council

Section 1. The Council shall meet during the Annual [Session] Convention and at such times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual [Session] Convention to organize. The Council shall elect a Chairman and a Vice-Chairman for a term of one year. The Chairman may be reelected to serve not more than four consecutive terms of one year each. The Council shall, through its Chairman, make an annual report to the House of Delegates.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and to keep in touch with the activities of and aid in the betterment of the component societies of his district. He shall make reports of his work and the condition of the profession of each county in his district to the Council. The necessary traveling expenses incurred by each Councilor in the line of duties herein imposed may be allowed on a properly itemized statement submitted monthly and within the current year, including his expense in attending the Annual [Session] Convention of the Association. No Councilor shall be eligible for the position of Delegate to the House of Delegates during his term of office as Councilor, nor shall he vote in the House of Delegates.

Sec. 3. The Council shall be the executive body of the Association and between [sessions] the Annual Conventions shall exercise the power conferred on it by the House of Delegates under the Constitution and Bylaws.

Sec. 4. The District Councilors shall select one of their number who, together with two members of component societies within the Council District selected by the District Councilors, shall serve as a Board to hear and by a majority vote adjudicate any questions involving the right and standing of members, either in relation to other members or to component societies or to the Association, and all matters of discipline affecting the conduct of members of component societies, or other matters.

The Council shall be the appellate Board of Censors of the Association. It shall hear and adjudicate all matters on appeal from the decision of the Councilor Board; it shall hear and adjudicate matters of an ethical nature brought before the House of Delegates or [the] a general meeting [which] and these matters shall be referred to the Council without discussion. On original decision or appellate determination, its decision shall be final unless appealed to the then convened meeting or the next meeting of the House of Delegates.

Sec. 5. Charters shall be issued to component societies only on approval of the Council and shall be signed by the President and Secretary of this Association. Upon the recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and Bylaws.

Sec. 6. In sparsely settled sections, the Council shall have authority to organize the members of two or more counties into societies, to be suitably designed so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 7. The Council shall provide for and supervise the issuance of all publications of the Association including proceedings, the transactions and memoirs, and shall have authority to appoint an Editor and such assistants as it deems necessary. It shall prescribe the methods of accounting and through a committee of three of its members, to be known as a Committee on Auditing and Appropriations, shall audit all accounts of this Association. The Council shall adopt an annual budget providing for the necessary expenses of the Association for the following calendar year. This budget shall be prepared and presented for consideration in the last quarter of each year by the Committee on Auditing and Appropriations. A complete and detailed report shall be submitted to the component societies as provided in Section 8, Chapter III. The Council shall submit an annual report of the House of Delegates which shall specify the character and cost of the publications of the Association, the amount and character of all its property, and shall provide full information concerning the management of all affairs of the Association which the Council is charged to administer.

Sec. 8. The Council shall appoint at least six months prior to the Annual [Session] Convention, a committee consisting of three of its members to be known as the Committee on Arrangements for the Annual [Session] Convention. On recommendation of the Committee, the Council shall appoint a Chairman of a Local Committee on Arrangements, who shall be a member of the component society of the county in which the Annual [Session] Convention is to be held, and who shall appoint and organize from the members of this component society the personnel of the Local Committee on Arrangements. The Local Committee on Arrangements shall serve as host for the Annual [Session] Convention and shall also act in an advisory capacity for the staff of the Executive Secretary of the Association who is responsible for arrangements for the Annual [Session] Convention.

Sec. 9. The Council shall by appointment fill any vacancy in office not otherwise provided for which may occur during the interval between Annual [Sessions] Conventions of the House of Delegates; the appointee shall serve until his successor has been elected and has qualified.

Sec. 10. The salaries of all employees of the Association shall be fixed by the Council.

Sec. 11. The Council shall provide such headquarters for the Association as may be required to conduct its business properly.

Sec. 12. The Council shall be empowered to elect an Executive Secretary and Assistant Executive Secretary and such other personnel as may be necessary, who need not be members of the Missouri State Medical Association, each of whom shall perform such duties as the Council may designate and receive such salary and serve for such periods and under such conditions as the Council may determine.

Chapter VII. Committees and Commissions

Section 1. Standing Committees of the Missouri State Medical Association, the chairman of which shall be appointed by the Association President unless otherwise provided in these Bylaws, will be as follows:

Executive Committee.
Committee on Constitution and Bylaws.
Committee on Publication.
Committee on Legislative Affairs.
Committee on Planning.
Committee on Voluntary Health Agencies.
Committee on the Impaired Physician.

The **Executive Committee** shall consist of the Association President, President-Elect, Secretary, Treasurer, Council Chairman and Council Vice-Chairman. The President of the Association shall be Chairman of the Executive Committee. The Executive Committee shall plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Secretary's Office between meetings of the Council, but shall be responsible at all times to the Council.

The Committee on **Constitution and Bylaws** shall consist of five members named by the President and shall propose such amendments to the Constitution and Bylaws as are deemed wise and expedient and bring before the House of Delegates such amendments as it or other members of the Association may present for consideration. The President shall appoint one member for one year, two members for two years and two members for three years. As the term of each expires, his successor shall be appointed for a term of three years.

The Committee on **Publication** shall consist of five members and be appointed annually by the Council and shall be responsible for general publication and distribution policies of the Journal. The Editor of the Journal shall be designated by the Council and also shall serve as Chairman of the Committee on Publication. The Editor shall be empowered to nominate an Editorial Board, subject to approval by the Council. The members of the Editorial Board will assist the Editor in soliciting, preparing and reviewing material for publication in the Journal.

The Committee on **Legislative Affairs** shall consist of five members of the Association, appointed annually by the President. The Committee shall consider legislative proposals affecting health problems of the people of the state and the practice of medicine and shall make recommendations to the Council and the House of Delegates as well as directing staff activities in such matters.

The **Planning Committee** shall consist of ten members to be appointed by the President. Two members shall be appointed for one year, two for two years, two for three years, two for four years and two for five years. As the term of each expires, his successor shall be appointed for a term of five years. In making such appointments, the President shall be governed by experience of the member, the size of his medical society and his geographical area, so as to have a representative committee. Age of the members shall be considered to the end that one third to one half of the committee shall be of an age group that should contemplate ten to twenty years more of active practice.

The Committee on **Voluntary Health Agencies** shall consist of five members of the Association appointed by the President. Two members shall be appointed for three years, two members for two years and one member for one year. As the term of each expires, his successor shall be appointed for a term of three years. The Committee on Voluntary Health Agencies shall provide liaison and work with all voluntary health organizations.

The Committee on the **Impaired Physician** shall consist of five members of the Association appointed by the President. Two members shall be appointed for three years, two for two years, and one member for one year. As the term of each expires, his successor shall be appointed for a term of three years. The Committee on the Impaired Physician shall plan and execute programs of professional assistance for members of this Association who may require special assistance to continue or return to their professional activities.

Sec. 2. Standing Commissions of the Missouri State Medical Association, who shall be responsible to the Council and whose chairman shall be appointed by the Association President, will be as follows:

Commission on Public Affairs.
Commission on Medical Economics, Third Party Medicine and Governmental Relations.
Commission on Continuing Education and Health Manpower.
Commission on Medical-Legal Affairs.
Commission on Interspecialty Medicine.

Subsec. a. The standing Commissions, unless otherwise provided in these Bylaws, shall consist of fifteen members serving three-year terms and the terms will be staggered so that the President will appoint five members of each Commission each year. Initially, the President will appoint five members to one-year terms, five members to two-year terms and five members to three-year terms and no member shall serve more than two consecutive terms.

Subsec. b. The Chairman of each Commission may appoint Ad Hoc Committees to carry out the Commission's programs. These Ad Hoc Committees may include any Missouri State Medical Association member.

Subsec. c. The Chairman of the Council shall appoint each year an appropriate Councilor to serve as advisor to each respective Commission.

The Commission on **Public Affairs** shall plan and execute programs designed to enhance the relationship between the public and the medical profession. The Commission shall have responsibility in the fields of industrial health, environmental health, medicine and religion, trauma, disaster medical care and national defense and other public matters.

The Commission on **Medical Economics, Third Party Medicine and Governmental Relations** shall keep close liaison and work with peer and utilization review mechanisms, insurance intermediaries and governmental agencies.

The Commission on **Continuing Education and Health Manpower** shall determine the character and scope of the scientific proceedings of the Association for each [annual session] Annual Convention as well as to make all arrangements for such [annual sessions] Annual Conventions, subject to the instructions of the House of Delegates. The Commission shall also be responsible for the entire continuing education program of the Association, shall have all matters pertaining to hospitals referred to it, shall carry on all programs in the recruitment of health manpower in professional as well as in allied health fields and shall be responsible for programs in the rural health field.

The Commission on **Medical-Legal Affairs** shall investigate and study medical-legal matters affecting the practice of medicine, make recommendations to the Council and House of Delegates and also make certain that all Association members are kept informed of important developments in this field. The Commission also may work with similar groups formed by the State Bar Association on matters of joint interest and concern as well as with governmental and insurance agencies in this field.

The Commission on **Interspecialty Medicine** shall be composed of one representative of each statewide specialty group as recognized by the Association Council. The President of the Missouri State Medical Association shall appoint annually to the Commission a representative from each of the authorized groups as submitted to him by the specialty organization. In the event that such a nominee is not submitted to him by an organization, the Association President may designate a member of the specialty group to serve on the Commission.

The Commission shall be charged with the responsibility of reviewing organization problems with respect to scientific programs, socioeconomic and legislative matters that affect their particular specialties; in addition, the Commission shall have the responsibility for programs and activities in fields relating to disease and health services involving the citizens of our state and such other matters as the Council shall direct. Also, the Commission shall provide close liaison between the various specialty organizations and the Missouri State Medical Association.

Sec. 3. Fifty percent of a Committee or a Commission should be present at an official meeting to constitute a quorum.

Sec. 4. Special committees may be appointed by the President or the Council as circumstances may demand.

CHAPTER VIII. DUES AND ASSESSMENTS

Section 1. (a). The Annual Dues of this Association shall be $115 which shall be applicable to each active member of the Association beginning in 1978 and shall be levied per capita on the active members of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of $57.50 for the first calendar year and shall be Active members; the per capita levy for junior members shall be $10.00 per year; the per capita levy for student members shall be $5.00 per year; honor members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied.

(b). An assessment of $10.00 per year on each active member of the Association shall be applicable for a three-year period beginning in 1981. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

(c). An assessment of $5.00 per year on each active member who has left his training program and is entering practice for the first time shall be applicable for one calendar year. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

Sec. 2. Three dollars of the annual dues shall be credited to the account of the Journal for each member's annual subscription. The remainder of the amount shall be credited to the general fund of the Association.

Sec. 3. The House of Delegates may, when in its judgment the best interest of the Association demands, recommend an assessment on each active, junior and student member. Such assessment shall be levied only by consent of two thirds of the members of the House of Delegates present and voting. Funds obtained from such special assessment shall be allocated only for the purposes for which such assessment is levied and in accordance with substantiating budgets. Unexpended balances from such assessments must be reported to the House of Delegates for reallocation.

Sec. 4. The Secretary of each component society shall cause to be collected and remitted to the Treasurer of this Association the per capita levies. Upon authorization of any component society, the Treasurer of this Association may collect the per capita levies directly from the members of that component society. Any member whose name has not been reported for enrollment and whose dues have not been remitted to the Treasurer of this Association on or before March 1 shall stand suspended until his name is properly reported and his dues for the current year are paid. On December 31 of each year, members delinquent in payment of dues, and assessment if such has been made, or any part thereof shall, ipso facto, forfeit their memberships. No suspended member shall be eligible to register at an [annual session] Annual Convention.

CHAPTER IX. RULES OF CONDUCT

Section 1. The ethical principles governing the members of the American Medical Association shall govern members of this Association.

Sec. 2. Any member of this Association who testifies as a medical expert witness outside of the specialty of the physician represents unethical conduct. In the future, any physician who testifies as a medical expert witness outside of his specialty or logical extension of his field of expertise or who interferes with the proper administration of justice by misrepresenting his qualifications or giving false or misleading testimony will be subject to expulsion, censorship, or reprimand after due process from the Missouri State

Medical Association.

Any member of this Association who testifies as a medical expert witness without meeting the qualifications set forth in this section, shall be subject to expulsion, censorship, or reprimand after a due process hearing as set forth. An expert witness must have basic educational and professional knowledge as a general foundation for his testimony and, in addition, have current personal experience and practical familiarity with the problems being considered and be actively engaged in the practice of the medical subject under discussion.

Nothing in the above is to be construed as preventing the treating physician from testifying on the merits of the case.

CHAPTER X. RULES OF ORDER

The deliberations of this Association shall be conducted in accordance with parliamentary usages as defined in *Sturgis Standard Code of Parliamentary Procedure*.

CHAPTER XI. COMPONENT SOCIETIES

Section 1. All component societies now in affiliation with the State Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the Council, receive charters from this Association provided that their Constitutions and Bylaws shall have been submitted to the Council and received its approval.

Sec. 2. Each component society shall be judge of the qualifications of its members, subject to review and final decision by the Council of the State Association. Every reputable and legally qualified physician or medical student who does not practice, nor profess to practice sectarian medicine, and who resides or practices in the same county, who shall apply for membership on the prescribed form and subscribe for the Journal and pay the annual dues and assessments for the current year, shall be eligible for election to membership.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation. The Council of the State Association shall have final authority to expel a member should a component county society fail to do so after being so requested by the Council.

The Council may upon request of a component society remit the state dues and assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding his disability; provided, that the component society shall remit the component society dues of such member.

The Council may, upon request of a component society, remit the state dues and assessments of a deserving member, found to fall within what is classified as a hardship case, during the period of said hardship until such time as the dues again become payable; provided that the component society shall remit the component society dues of such member.

A physician living near a component society boundary line may hold his membership in that component society most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 3. Any member who may feel aggrieved by the action of the component society in suspending or expelling him shall have the right to appeal to the Council whose decision shall be final. A component society shall at all times be permitted to appeal or refer questions involving membership to the Council of the State Association for final determination.

Sec. 4. In hearing appeals, the Council may admit oral or written evidence or both as in its judgment will most fairly present the facts.

Sec. 5. When a member in good standing in a component society moves to another jurisdiction in this state, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the jurisdiction to which he moves. Pending his acceptance or rejection by the component society to which he moves, such member shall be considered to be in good standing in the component society from which he was certified and in the State Association to the end of the period for which his dues have been paid.

A member of a component society who moves to and engages in the practice of medicine at a location in another area in which there is a component society shall forfeit his membership in this Association and the Secretary shall remove his name from the roster of members of the Missouri State Medical Association unless within one year after such change of residence he becomes a member of the component society of the area to which he has moved.

Sec. 6. Each component society shall have general direction of the affairs of the profession in its area and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician and medical student in the area. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it includes every eligible physician and medical student in the area.

Sec. 7. At some meeting in advance of the Annual [Session] Convention of this Association, each component society shall elect one or more delegates and an equal number of alternates [therefor] to represent it in the House of Delegates of this Association, in accordance with Chapter III, Section 2 [2A] or, 3 of these Bylaws. The secretary of each component society shall send a list of such delegates and alternates to the Secretary of this Association at least sixty days before the Annual [Session] Convention. Representation in the House of Delegates shall be contingent on compliance with the foregoing provisions.

Sec. 8. The secretary of each component society shall keep a roster of its members and, if practicable, a list of non-affiliated physicians, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary by the Council. He shall send a copy of the program of each meeting to his district councilor and to the Secretary of the State Association.

Sec. 9. Any component society, in a manner approved by the State Association, or the State Association with the consent of the component society affected, may undertake, organize and put into effect plans for the medical care of indigent persons or indigent groups, and low income groups, by agreements with physicians, public officials or others and by the use of contributions, cooperative funds or other means; provided, however, that a free choice of the available and participating physicians in that territory shall be allowed to the patient and that all relationships, legal or otherwise, between the physician and the patient shall be and remain as though it were strictly an individual employment.

CHAPTER XII. AMENDMENTS

Section 1. These Bylaws may be amended at any Annual [Session] Convention by a two-thirds vote of the delegates present and voting at that session, if the proposed amendment has been properly submitted to the House of Delegates and has laid on the table for one day.

Sec. 2. Upon the adoption of this Constitution and these Bylaws all previous constitutions and bylaws are thereby repealed.

CHAPTER XIII. PURPOSE

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673 or (314) 454-3873
***Contact:* Loretta Giacoletto, Office of CME**

Jan. 23-30	Obstetrics and Gynecology (Aboard the M/S Southward)
Apr. 2-5-May 3	Fourth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (Athens, Greece)

St. Louis University Medical Center
Continuing Education
3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
***Contact:* John A. Grellner, Director**

Mar. 31-Apr. 1	Recent Advances in Pediatric Health Care-Diagnosis

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Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
***Contact:* Richard B. Oglesby, M.D.**

May 16	14th Eye Seminar: Extracapsular Cataract Extraction

Greater Kansas City Radiological Society

Note: 4:00 PM lectures will be held in the Dept. of Diagnostic Radiology, University of Kansas Medical Center, Kansas City, Kan.
6:30 PM lectures will be held at the Alameda Plaza Hotel, Kansas City

Feb. 10	4:00 PM Recent Advances in Diagnostic Ultrasound 6:30 PM Obstetrical Ultrasound: An Update
Mar. 10	4:00 PM Digital Radiography — Equipment and Technical Considerations 6:30 PM Digital Radiography Clinical Applications
Apr. 14	4:00 PM Percutaneous Abscess Drainage 6:30 PM Percutaneous Biopsy Techniques

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
***Contact:* Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)
3:00 PM — Surgical Rounds
(Every Wednesday and Friday)
4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)
4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)
8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)
7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

***Contact:* David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

Feb. 15-17	Second Annual National Conference on Continuous Ambulatory Peritoneal Dialysis (Crown Center Hotel, Kansas City)
Mar. 9	Preceptors Day
Mar. 10-11	Fifth Annual Family Practice Update Session
Mar. 24-25	Third Annual Spring Surgery Update
Mar. 29-30	28th Annual Urology Seminar (Crown Center Hotel, Kansas City)
Apr. 2-4	A Working Conference on Authority, Responsibility and Organization
Apr. 22-23	Fifth Annual Primary Pediatrics for the Primary Physicians
May 7-9	Fifth Annual Missouri Cardiovascular Conference (Tan-Tar-A, Lake Ozark)

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

Feb. 19-20	The Long Weekend: Medical Problems in the Patient Who Needs Surgery (Alameda Plaza)
Feb. 21-28	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Palm Springs, Calif.)
Feb. 28-Mar. 7	Traveling Medical Education Course — Kansas City Southwest Clinical Society (St. Thomas, U.S. Virgin Islands)
Mar. 18-20	Perspectives in Medical Care (Hyatt Regency Hotel)
Mar. 20-27	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Crested Butte, Colo.)
Mar. 31	Reproductive Endocrinology and Infertility (Alameda Plaza Hotel)
Apr. 1-3	Update in Obstetrics and Gynecology (Alameda Plaza Hotel)
May 6-7	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
June 5	Symposium on Physical Fitness (Crown Center Hotel)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
***Contact:* Ronald G. Evens, M.D., Director**

Feb. 8	City-Wide Radiology Conference — CT of the Genitourinary Tract
Mar. 8	City-Wide Radiology Conference — Photo-Electronic (Digital) Radiology
Apr. 14	Leroy Sante Lecture by Dr. Benjamin Felson, University of Cincinnati
May 10	City-Wide Radiology Conference — Neuroradiology

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MSMA Members Receive Physician's Recognition Award

Forty-seven MSMA members qualified for the MSMA-AMA Physician's Recognition Award in November, 1981.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

George D. Bollozos, St. Louis
Robert Burstein, St. Louis
James H. Butt, Columbia
Benjamin F. Byland, Maryville
Selbert G. Chernoff, Lee's Summit
Charles J. Cherre, St. Louis
Thomas B. Cook, Richmond
Alan H. Edelman, St. Louis
Farida Farzana, Florissant
Thomas B. Ferguson, St. Louis
Jacob W. Fleming, Moberly
Jorge A. Fortin, Rolla
Arthur J. Graves, Mt. Vernon
John C. Hagan, North Kansas City
James J. Hamilton, Kansas City
James S. Harbrecht, Kansas City
Karl A. Jacob, St. Louis
Chul Kim, Poplar Bluff
Il T. Lim, Chesterfield
Robert T. Littlejohn, North Kansas City
Robert H. Lund, St. Louis
Richard L. Maginn, St. Joseph
Jay L. Meyer, St. Louis
David L. Moore, Kansas City
Carl M. Myers, Platte City
Voislav F. Ognyanov, St. Louis
Agatha L. Park, St. Louis
William H. Poggemeyer, St. Charles
Donald E. Riesenberg, Springfield
James A. Roller, Hannibal
Antonio B. Santillano, St. Louis
Bommakanti M. Saran, Kansas City
Jacques P. Schaerer, St. Louis
Modaser Shah, St. Louis
Robert A. Shively, St. Louis
Bernard Silver, St. Louis
Milo J. Spurgeon, Columbia
Walter R. Stafford, Clayton
Donald B. Strominger, St. Louis
Fred A. Thomas, Kansas City
Henry Tyler, St. Joseph
John H. Uhlemann, St. Charles
George A. Ulett, St. Louis
Devendra K. Varma, Poplar Bluff
Robert D. Velander, Cape Girardeau
George R. Weeks, Cape Girardeau
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NEWS From the Medical Schools

ST. LOUIS UNIVERSITY

David R. Challoner, M.D., professor of internal medicine and dean of the School of Medicine since 1975, will leave that position effective June 30, 1982 to assume the position of vice-president for health affairs at the University of Florida in Gainesville.

Dr. Challoner

At the University of Florida, Dr. Challoner will be principal administrator for the colleges of medicine, veterinary medicine, dentistry, nursing, pharmacy and health-related professions and the 476-bed William A. Shands teaching hospital. The schools and hospital have a combined budget of more than $157 million. Dr. Challoner assumes a position which became vacant in mid-1980.

Dr. Challoner is an internist, specializing in endocrinology and metabolism. He has authored or co-authored more than 50 papers and abstracts. His principal research interests have been the understanding of the use of metabolic fuels by the heart and mechanisms in the action of insulin.

Dr. Challoner is an honors graduate of Harvard Medical School. He was professor and assistant chairman of the Department of Medicine at the Indiana University School of Medicine. He joined that school's faculty in 1967, after an internship and residency at Columbia Presbyterian Hospital in New York City. He also was chief medical resident at King County Hospital, University of Washington in Seattle.

Between his second and third years at Harvard, Dr. Challoner was a research fellow at Cambridge University in Cambridge, England. During his tenure at Indiana University, he was a visiting scholar at the Institute of Medicine, National Academy of Sciences in Washington, D. C.

Dr. Challoner's professional memberships include the American College of Physicians, the Association of American Physicians and the American Physiological Society. He is also known for his work as president of the American Federation for Clinical Research, the organization representing physicians engaged in clinical investigation. Most recently he was elected to the Institute of Medicine of the National Academy of Sciences and to the American Clinical and Climatological Association as well as vice-chairman of the section of medical schools of the American Medical Association.

Vincent A. Chiappinelli, Ph.D., assistant professor of pharmacology, has received a three-year grant totalling $153,722 from the National Institute of Neurology and Communicative Disorders and Stroke.

Dr. Chiappinelli will examine in detail the development and biochemical properties of drug receptors on avian autonomic ganglion cells. Using freeze-dried snake toxins, he will closely examine why these neurotoxins bind tightly to the natural receptors, preventing the receptors from functioning normally.

"The next twenty years will provide many breakthroughs," said Dr. Chiappinelli. "I feel that within my lifetime, scientists could discover how to repair damage caused by a severed spinal cord, or reverse the paralysis in persons with head injuries or victims of strokes."

Dr. Chiappinelli received his A.B. degree in 1973 from Boston University and earned his Ph.D. in 1978 from the University of Connecticut. He joined the faculty of St. Louis University School of Medicine in 1980.

Heli-Kristy Kultas-Ilinsky, Ph.D., assistant professor of anatomy, School of Medicine, was awarded a three-year, $125,889 grant from the National Institute of Neurological and Communicative Disorders and Stroke. Her husband, *Igor Ilinsky*, M.D., Ph.D., is the co-investigator of the grant.

They will simulate the conditions of Parkinson's disease and other movement disorders in animals and then study the rearrangement of connections between nerve cells. Results of their research will be used to develop treatment approaches for these types of diseases.

Dr. Kultas-Ilinsky earned her Ph.D. degree from the Academy of Medicine in the U.S.S.R. in

1975 before coming to the School of Medicine.

UNIVERSITY OF MISSOURI-KANSAS CITY

The School of Medicine has joined the UMKC Schools of Dentistry, Nursing and Pharmacy in establishing a Long Weekend Series in Geriatrics. The program will bring together upper-level students from dentistry, medicine and pharmacy and graduate nursing students twice each semester for a Saturday and Sunday combination of seminars and case studies.

The four schools plan to hold two Long Weekends each semester. Each two-day session will concern the problems of senior citizens. Faculty members of the schools and community leaders will teach the series.

Support for the Long Weekends is provided by a geriatric curriculum development grant from the Health Resources Administration of the U. S. Department of Health and Human Services. These programs are under the direction of *Richardson K. Noback, M.D.*

Students in the six-year BA/MD program at the University of Missouri-Kansas City have turned their multiple talents to a variety of projects in recent weeks. Under the sponsorship of the Medical Students' Advisory Council, the annual "faculty roast" (FAPAN) was served up on Saturday, December 5 complete with songs, dances and skits. No one in the upper echelons of the administration was spared. It was all in good fun (and taste) and netted an approximate $700 contribution to the Kansas City Area Ronald McDonald House.

Continuing an activity of long standing, the UMKC members of the Student National Medical Association staffed a Blood Pressure Screening Clinic at a local shopping mall last weekend. The AMWA Chapter at UMKC sponsored a recent Blood Drive at the medical school, and while they were drawing on our platelet reserves, the AMSA chapter was sponsoring a workshop on financial aid to identify all possible infusions of cash reserves.

This fall, the Student Learning Center at the medical school trained 29 student tutors who have been providing assistance throughout this term to students in the first- and second-year required basic science courses. The student Learning Center is the recipient this year of an HCOP (Health Careers Opportunity Program) Grant. The School of Medicine staff has been involved in all phases of the implementation of that program and recently hosted a group of high school students from Lincoln Academy in Kansas City for a day on campus to obtain information

Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

about a career in medicine in addition to "hands on" experience working with Year 3 students in the laboratory.

UNIVERSITY OF MISSOURI-COLUMBIA

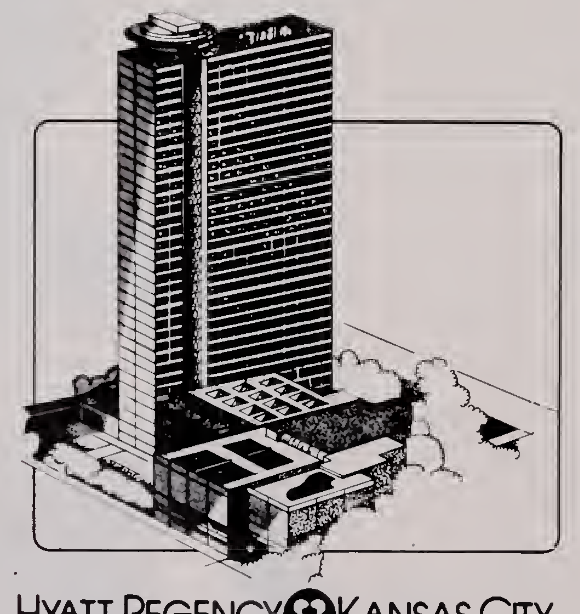
Dr. Sherwood Baker, professor of family and community medicine and one of the founders of the Family Practice Residency Program at the Health Sciences Center, is retiring after 18 years on the faculty. Dr. Baker began his career at the University in 1963 as Chief of the Section of Medical Practice and served as director of the Family Practice Residency from 1970-1974.

After receiving his M.D. degree from the University of Illinois in 1942, Dr. Baker was an intern and assistant resident at Cook County General Hospital in Chicago. He served as an Army Air Force medical officer during World War II, returning in 1946 to his hometown of Mt. Morris, Ill., to practice medicine for the next 17 years.

After joining the faculty of the UMC School of Medicine, Dr. Baker received a Master of Science in Public Health degree from the University in 1968.

Dr. Baker has witnessed important changes in family medicine while at the University. "Seeing family practice become a nationally accepted and integrated university discipline has been rewarding," he says.

Missouri State Medical Association
124th ANNUAL SESSION
April 1-4, 1982



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He is the author of numerous publications dealing with the practice of family medicine and time studies of general practitioners in Missouri, California and New Zealand. His other research interests have included a joint study with the Department of Rural Sociology on Health Care Decisions made by consumers of medical services in Missouri.

After he retires Jan. 19, 1982, Dr. Baker plans to do academic reading and work in photography and woodworking.

Dr. E. Lee Forker, director of the Division of Gastroenterology and Liver Disease was recently elected vice-president of the American Association for the Study of Liver Diseases at the Association's annual meeting in Chicago.

Dr. Forker will assume the presidency in 1982. The Association includes 900 physicians from North America and abroad who are specialists in liver disease.

Dr. James Weiss, professor and chairman of the Department of Psychiatry and *Dr. Armando Favazza,* professor of psychiatry, were two of 43 international experts invited to present papers at the Eighth World Congress of Social Psychiatry Symposium held in Macao, China on September 6-12.

Dr. Weiss, one of four keynote speakers, discussed research on psychopathic behavior. Dr. Favazza was chairman of a transcultural psychiatry session and lectured on religious healing of mental illness.

Following the meetings, Dr. Weiss served as the first visiting professor of psychiatry in medical schools at the Chinese University of Hong Kong and the Beijing Medical College and as consultant at several psychiatric hospitals in mainland China.

Dr. Howard Hopps, Curator's Professor of Pathology, served as chairman of a six-member panel that produced the monograph, "Aging and the Geochemical Environment," which was recently published by the National Academy of Science.

Herbert I. Sauer, research associate in family and community medicine, and *Walter D. Keller,* professor emeritus of geology, served with Hopps as panel members.

The study considers how the physical environment modifies the aging process.

In Memoriam

Juliette M. Eliscu, M.D., P.O. Box 1326, Joplin 64801; graduate of Rush Medical College, 1936; member of Jasper County Medical Society; aged 71; died Oct. 27, 1981.

Bernie Parsons, M.D., Highway 136, Albany 64402; graduate of the University of Oklahoma, 1961; member of Northwest County Medical Society; aged 50; died Oct. 31, 1981.

Louis Keller, M.D., 12 Westwood Country Club Grounds, St. Louis 63131; graduate of St. Louis University, 1937; member of St. Louis Metropolitan Medical Society; aged 75; died Nov. 6, 1981.

Sol Weber, M.D., 827 S. Hanley Rd., St. Louis 63105; graduate of St. Louis University, 1923; member of St. Louis Metropolitan Medical Society; aged 85; died Nov. 6, 1981.

Vicente D. Deles, M.D., 121 Mississippi Ave., Crystal City 63019; graduate of the University of Santo Tomas, 1955; member of Jefferson County Medical Society; aged 53; died Nov. 11, 1981.

George A. Carder, M.D., 1011 Scott Dr., Liberty 64068; graduate of Washington University, 1964; member of Clay County Medical Society; aged 43; died Nov. 24, 1981.

George H. Wood, M.D., 530 E. Highland, Carthage 64836; graduate of Washington University, 1928; member of Jasper County Medical Society; aged 82; died Nov. 25, 1981.

James A. Forsen, M.D., Village Green, Apt. #19, 14443 Bantry, Chesterfield 63017; graduate of St. Louis University, 1924; member of St. Louis Metropolitan Medical Society; aged 86; died Nov. 27, 1981.

Diosdada Gullen, M.D., 202 Stablestone Dr., Chesterfield 63017; graduate of the University of Santo Tomas; 1955, member of St. Louis Metropolitan Medical Society; aged 51; died Dec. 7, 1981.

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

New Members

Laird A. Bell, M.D., 304 Professional Bldg., 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr. Bell is a native of Buffalo, N.Y., received his preliminary education at the University of Illinois and his M.D. degree at Washington University in 1977. He specializes in obstetrics and gynecology.

Mindy M. Boehm, M.D., 2727 Main, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Boehm is a native of Norton, Kan., received her preliminary education at the University of Kansas and her M.D. degree at the University of Kansas in 1978. She specializes in pediatrics.

Steven K. Bowlin, M.D., Consortium for Health Education, Internal Medicine Residency Program, 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Bowlin is a native of Ft. Leavenworth, Kan., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1981. He specializes in internal medicine.

Richard Lee Breeden, M.D., Suite 120, 1100 W. 10th, Rolla 65401, has become a member of Mid-Missouri County Medical Society. Dr. Breeden is a native of Waynesville, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1976. He specializes in neurology.

James B. Chong, M.D., 1330 S. Highway 63, Houston 65483, has become a member of South Central Counties Medical Society. Dr. Chong is a native of Korea, received his preliminary education at Catholic University and his M.D. degree at Catholic University in 1960. He specializes in obstetrics and gynecology.

Francis H. Corcoran, M.D., 2817 McClelland Blvd., Suite 210, Joplin 64755, has become a member of Jasper County Medical Society. Dr. Corcoran is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1962. He specializes in cardiovascular diseases.

Thomas P. Davis III, M.D., 1443 N. Robberson, Springfield 65802, has become a member of Greene County Medical Society. Dr. Davis is a native of St. Louis, received his preliminary education at Drury College and his M.D. degree at St. Louis University in 1977. He specializes in internal medicine.

Gerald W. Dickerson, D.O., Hillcrest Plaza, Doniphan 63935, has become a member of Butler-Wayne-Ripley-Carter County Medical Society. Dr. Dickerson is a native of Decatur, Ill., received his preliminary education at Northeast Missouri State Teachers College and his D.O. degree at Kansas City College of Osteopathic Medicine in 1952. He specializes in general practice.

Kevin R. Dye, M.D., Consortium for Health Education, Internal Medicine Residency Program, 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Dye is a native of San Antonio, Tex., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1981. He specializes in internal medicine.

Joseph J. Elterman, M.D., Box 365, Hillsboro 63050, has become a member of Jefferson County Medical Society. Dr. Elterman is a native of New York, N.Y., received his preliminary education at Washington University and his M.D. at Washington University in 1978. He specializes in internal medicine.

James Austin Felts, M.D., 1100 W. 10th, Rolla 65401, has become a member of Mid-Missouri County Medical Society. Dr. Felts is a native of Herrin, Ill., received his preliminary education at Washington University and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in family practice.

Lawrence Edward Gurian, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Gurian is a native of Portland, Ore., received his preliminary education at Linfield College and his M.D. degree at the University of Oregon in 1975. He specializes in gastroenterology.

R. Robert Hatlelid, M.D., 2817 McClelland Blvd., Suite 110, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Hatlelid is a native of Williston, N.D., received his preliminary education at St. John's University and his M.D. at the University of Texas-Dallas in 1976. He specializes in internal medicine.

John B. Kelly, M.D., 3101 McClelland, Joplin 64755, has become a member of Jasper County Medical Society. Dr. Kelly is a native of Dallas, Tex., received his preliminary education at Southwestern University in Georgetown, Tex. and his M.D. degree at Baylor University in 1971. He specializes in obstetrics and gynecology.

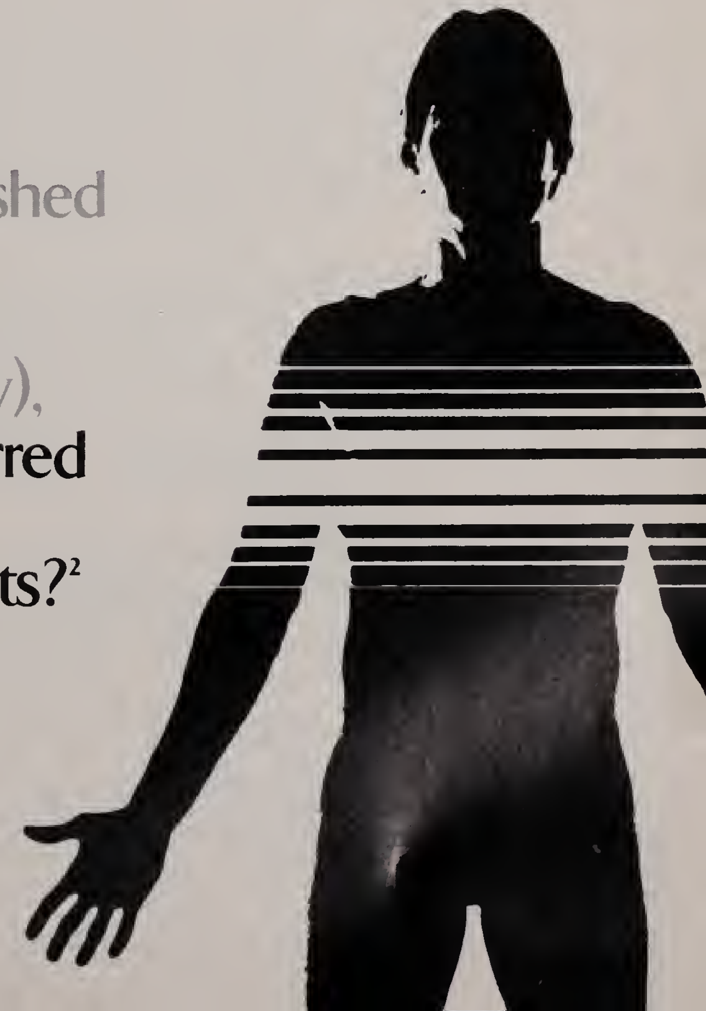
William Levanvo, M.D., 2817 McClelland, Joplin 64755, has become a member of Jasper County Medical Society. Dr. Levanvo is a native of Vietnam, received his preliminary education at Marseille University and his M.D. degree at Marseille University in 1959. He specializes in general practice.

Thomas W. Kobbermann, M.D., 2700 Hospital Dr., Suite 500, North Kansas City 64116, has become a member of Clay County Medical Association. Dr. Kobbermann is a native of Memphis, Tenn., received his preliminary education at the University of Arkansas and his M.D. degree at the University of Missouri-Columbia in 1976. He specializes in obstetrics and gynecology.

Richard C. Liong, M.D., 1330-D S. Highway 63, Houston 65483, has become a member of South Central Counties Medical Society. Dr. Liong is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at Far Eastern University in 1965. He specializes in general practice.

William R. Newman, M.D., 3107 McClelland Blvd., Joplin 64755, has become a member of Jasper County Medical Society. Dr. Newman is a native of Kilgore, Tex., received his preliminary education at Cornell University and his M.D. degree at Cornell University in 1977. He specializes in pediatrics.

Otis A. Plunk, M.D., 215 Teaco Rd., Kennett 63857, has become a member of Dunklin County Medical Society. Dr. Plunk is a native of Kennett, received his preliminary education at the University of Missouri-Columbia and his M.D. de-



In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study), which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]

gree at the University of Missouri-Columbia in 1980. He specializes in internal medicine.

John M. Roska, M.D., 4198 N. E. Vivion, Kansas City 64119, has become a member of Jackson County Medical Society. Dr. Roska is a native of Milwaukee, Wis., received his preliminary education at the University of Michigan and his M.D. degree at the Medical College of Wisconsin in 1975. He specializes in internal medicine.

Steven L. Russell, M.D., Consortium for Health Education, Internal Medicine Residency Program, 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Russell is a native of Joplin, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1981. He specializes in internal medicine.

Christopher Harrison Snyder, Jr., M.D., 1900 S. National, Springfield 65804, has become a member of Greene County Medical Society. Dr. Snyder is a native of Salt Lake City, Utah, received his preliminary education at Haverford College and his M.D. degree at Case Western Reserve University in 1974. He specializes in pediatrics.

Robert E. Stelle, M.D., Truman Medical Center-East, Route 17, Kansas City 64139, has become a member of Jackson County Medical Society. Dr. Stelle is a native of Kalamazoo, Mich., received his preliminary education at Kalamazoo College and his M.D. degree at the University of Michigan in 1959. He specializes in family practice.

D. Mitchell Stinnett, M.D., 2817 McClelland Blvd., Suite 211, Joplin 64755, has become a member of Jasper County Medical Society. Dr. Stinnett is a native of Joplin, received his preliminary education at the University of Missouri and his M.D. degree at Baylor College in 1971. He specializes in cardiovascular and thoracic surgery.

Nalini Tella, M.D., 411 Nichols Rd., Suite 212, Kansas City 64112, has become a member of Jackson County Medical Society. Dr. Tella is a native of India, received her preliminary education at J.M.J. College and her M.D. degree at Guntur Medical College in 1974. She specializes in internal medicine.

Sallie L. Veenstra, M.D., 1001 N. Independence Ave., Lee's Summit 64063, has become a member of Jackson County Medical Society. Dr. Veenstra is a native of Washington, D.C., received her preliminary education at the University of Richmond and her M.D. degree at Virginia Commonwealth University in 1978. She specializes in pediatrics.

Kenton I. Voorhees, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Voorhees is a native of St. Louis, received his preliminary education at Vanderbilt University and his M.D. degree at the University of Missouri-Columbia in 1980. He specializes in family practice.

Donald E. Walker, Jr., M.D., 2900 Hospital Dr., North Kansas City 64116, has become a member of Clay County Medical Association. Dr. Walker is a native of Waverly, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1974. He specializes in psychiatry.

Colleen Walz, M.D., 524 West 3rd, Lee's Summit 64063, has become a member of Jackson County Medical Society. Dr. Walz is a native of Portsmouth, Va., received her preliminary education at the University of Missouri-Kansas City and her M.D. degree at the University of Missouri-Kansas City in 1978. She specializes in family practice.

Mark Ward, M.D., 3302 McIntosh Circle, Joplin 64755, has become a member of Jasper County Medical Society. Dr. Ward is a native of Norton, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1978. He specializes in family practice.

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Michael Neil Whisenant, M.D., Consortium for Health Education, Internal Medicine Residency Program, 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Whisenant is a native of Rock Hill, S.C., received his preliminary education at the University of South Carolina and his M.D. degree at the Medical University of South Carolina in 1980. He specializes in internal medicine.

Warren Timothy Wilson, D.O., 2530-H S. Campbell, Springfield 65807, has become a member of Greene County Medical Society. Dr. Wilson is a native of Newark, Ohio, received his preliminary education at Wittenberg University and his D.O. degree at Kirksville College of Osteopathic Medicine in 1974. He specializes in family practice.

Robert L. Winders, M.D., 510 E. Gay St., Warrensburg 64093, has become a member of Johnson County Medical Society. Dr. Winders is a native of Greencastle, Ind., received his preliminary education at Indiana University and his M.D. degree at Indiana University in 1974. He specializes in general surgery.

Diana Lee Wright, M.D., 511 Elm, Chillicothe 64601, has become a member of Grand River Medical Society. Dr. Wright is a native of Des Moines, Iowa, received her preliminary education at Iowa State University and her M.D. degree at the University of Iowa in 1978. She specializes in internal medicine.

Student Members

St. Louis University

James C. W. Finley
David A. Hansen
Richard W. Illes
Arthur F. Kavanaugh
Steven L. Maskin
William J. Meyer
Joseph M. Ojile
Joseph V. Otten
Laura J. Petersen
Evelyne G. Schuetz
Daniel J. Scodary
Ann P. Zilliox

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

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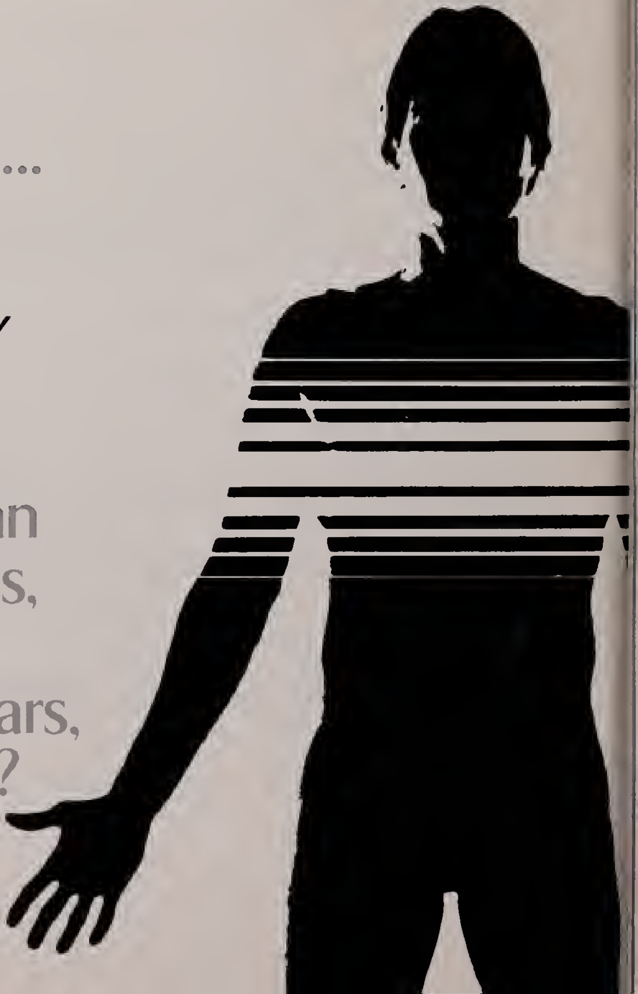

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In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

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The American Medical Association has on six occasions commended the AAMA for its commitment to the two association's common goals of improved health care and patient relations. Physicians serve as advisors on all levels of the AAMA and also attend state and national meetings. The AAMA is a non-profit organization, pledged never to become a trade union or collective bargaining agency.

As of July, 1981, there were 16,700 members nationwide, and in Missouri there were 241.

The AAMA will appreciate your support. If you would like further information, please write to Lorraine Whittington, Membership Chairman, 1120 E. 33rd, Joplin, MO 64801 or Shirley Sapp, President, Missouri Society, 813 Donnelly Ave., Columbia, MO 65201. National Headquarters for the AAMA are located at 1 E. Wacker Dr., Chicago, ILL 60601.

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Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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ADVERSE REACTIONS

Hydroflumethiazide

Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

SUPPLIED

Bottles of 100 and 1000 scored 50 mg. tablets.

References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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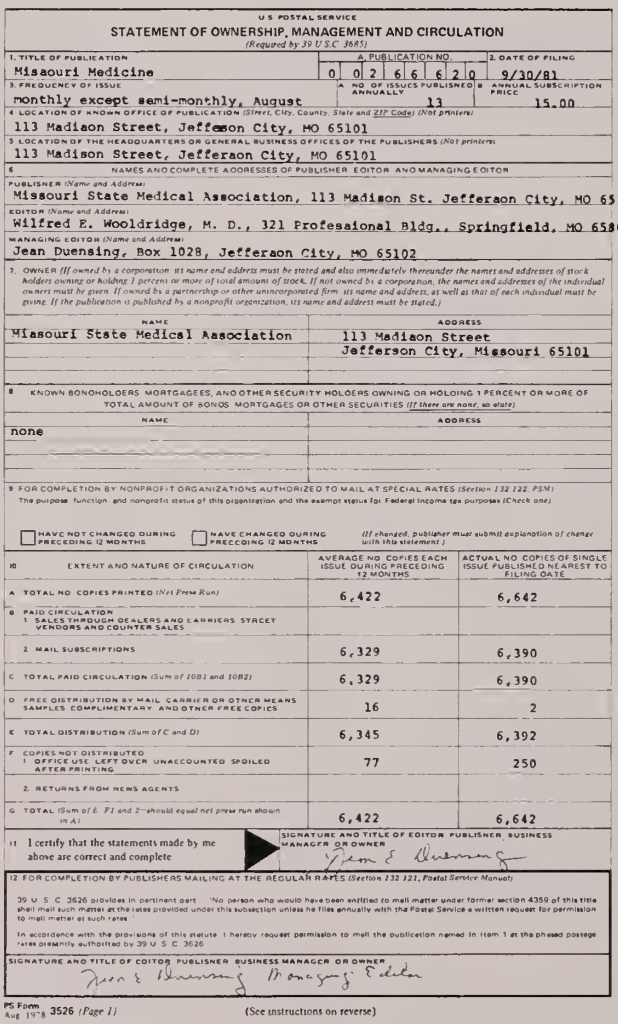

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in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE AMA'S 1982 fiscal year budget is based on expected revenue of $83,268,000 and expected expenses of $79,229,000. The budget will emphasize priorities of the restructured AMA, including representing the profession ($21.7 million) and providing scientific information ($23 million). Another $6.3 million will go toward providing socioeconomic information, and $4.5 million will be spent to provide data on the profession. More than 10% of the budget, $8.3 million, will be expended on programs to maintain educational standards. Other spending will include $5.9 million to maintain organizational and federation strength and $8.6 million to maintain the AMA as an organization. Most of the revenue is expected to come from membership dues, $44,232,000, and advertising, $15,443,000.

SINCE ITS FOUNDING in 1951, the AMA Education and Research Foundation has contributed $34,253,010 to the nation's medical schools. The funds are collected through mail solicitations and through campaigns conducted by the AMA Auxiliary. The AMA pays the general overhead expenses of the Foundation and provides its computer service without charge.

THE TWO LATEST public and physician opinion polls sponsored by the AMA reveal that cost is the main problem facing health care today. The public is highly satisfied with the quality of care, but is concerned about the ability to pay for extended illnesses. The public also has confidence in the AMA's ability to propose fair and workable health care policies. Physicians cite the cost of health care, government controls, and problems of delivery and access as issues that concern them most. The public poll was taken by the Gallup Organization, Inc., and the physician poll by Market Opinion Research.

MORE THAN 85% of member and nonmember physician respondents to the Market Opinion Research poll agreed with the AMA's positions on three issues: (1) that the federal government should not give preferential treatment to any form of medical practice, (2) health planning should be voluntary and locally based and (3) the decision whether to perform an abortion should rest with the patient and her physician. Sixty-five percent agreed that "It is the professional responsibility of physicians to support political representative actions undertaken on behalf of the profession."

"SEXUAL PROBLEMS in Medical Practice," published by the AMA, is now available to assist practicing physicians in the diagnosis of sexual problems and the management of sexual dysfunctions. The 400-page hardcover book consists of 27 chapters written by leading authorities. It is clinically oriented and referenced for daily use. Topics range from "How to Take a Sexual History" to "Legal Issues." The price of the book is $24 ($12 for medical students), plus $2 handling for any number of copies. Illinois, Wisconsin and New York residents should add state sales tax. Write AMA Order Department, OP-120, P.O. Box 821, Monroe, WI 53566. Medical students should provide the name of their school.

THE AMA HAS CENTRALIZED all services and activities in two major units. Executive Vice-President James H. Sammons, M.D., said the changes will further the consolidation of AMA programs and are necessary to "manage anticipated future growth." Whalen M. Strobhar was named deputy executive vice president for Public, Scientific and Health Service Policy, and Thomas F. Hannon was named deputy executive vice-president for Corporate, Publishing and Management Services. Joe D. Miller assumes the title of senior deputy executive vice-president and continues as Dr. Sammon's principal deputy.

EDITOR OF THE *"JOURNAL OF THE AMA,"* effective January 1, will be George D. Lundberg, M.D., chairman of the Department of Pathology at the University of California School of Medicine, Davis. On the AMA staff Dr. Lundberg also will be vice president for scientific information. He will succeed William R. Barclay, M.D., who retires at the end of the year. Dr. Lundberg, 48, has been a member of the *JAMA* editorial board since 1973. Dr. Barclay came to the AMA staff in 1970 and was named editor of the *Journal* and vice-president for scientific publications in 1976.

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Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

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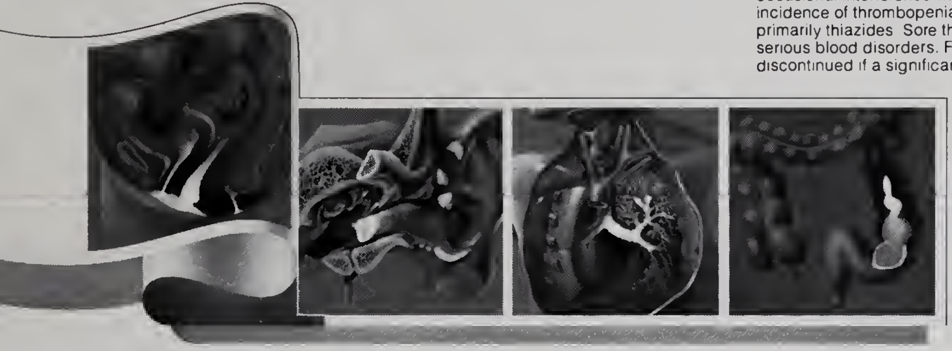

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in acute otitis media in children... effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults... clears the sputum and lowers its volume...on *b.i.d.* dosage

in shigellosis... faster relief of diarrhea than with ampicillin[2]

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae.* To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

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Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry-flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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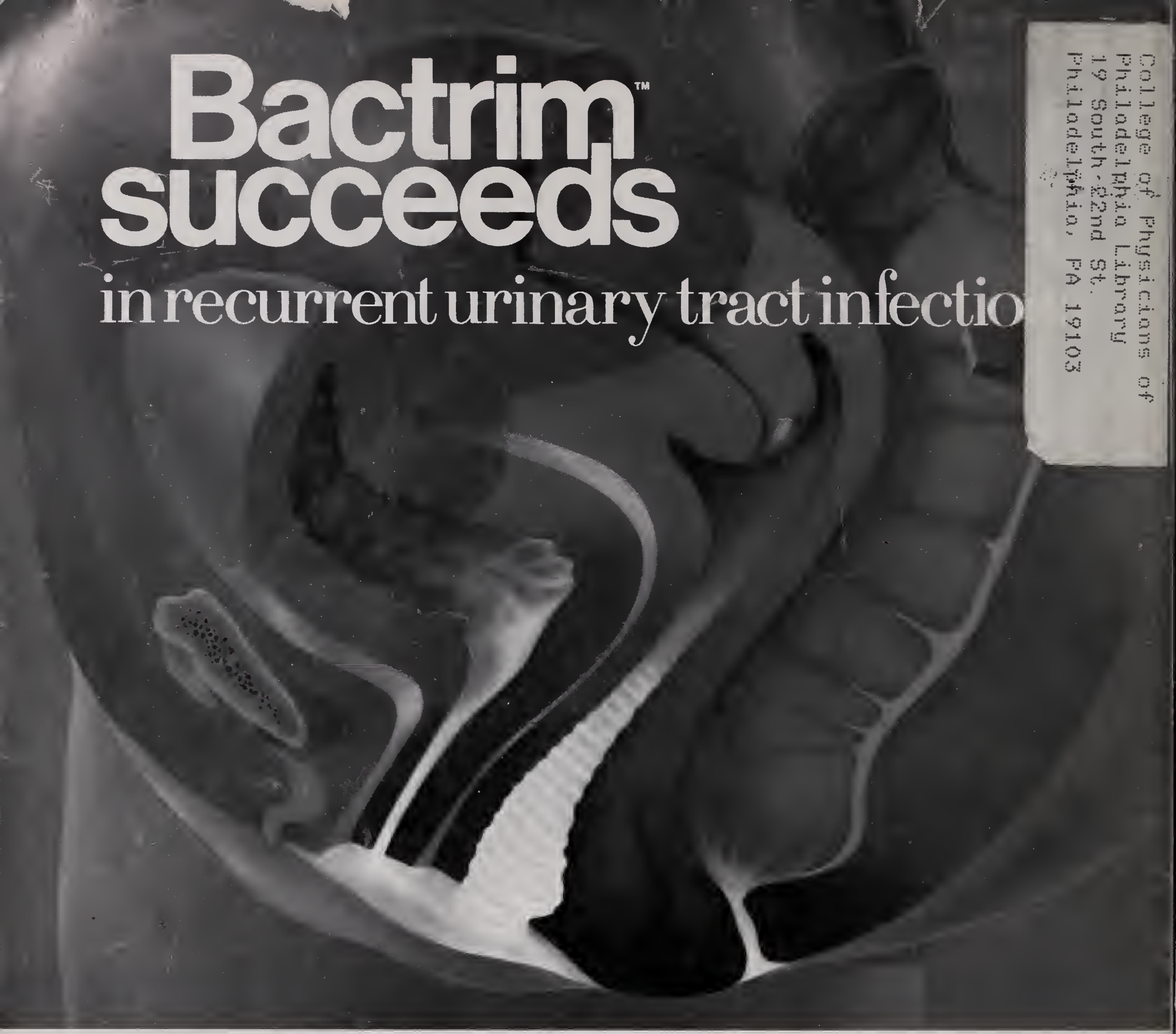

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160 mg trimethoprim and 800 mg sulfamethoxazole

DOUBLE STRENGTH TABLETS

Bactrim continues to demonstrate high clinical effectiveness in recurrent urinary tract infections. Bactrim reaches effective levels in urine, serum, and renal tissue*... the trimethoprim component diffuses into vaginal secretions in bactericidal concentrations[1]... and in the fecal flora, Bactrim effectively suppresses Enterobacteriaceae[1,2] with little resulting emergence of resistant organisms.

1. Rubin RH, Swartz MN: *N Engl J Med* 303:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

maximizes results with B.I.D. convenience

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* due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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79-2

Missouri Medicine

Vol. 79, No. 2 (ISSN 0026-6620) February, 1982

Hypophosphatemia

Special Review Article!

Extracolonic Manifestations of Ulcerative Colitis

Pulmonary Cancer of Triple Cell Differentiation with Sarcoid Reaction

1982
ANNUAL SESSION
April 1-4
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MSMA and Auxiliary Preliminary Programs

IMPORTANT!

Report of MSMA Committee on Constitution and Bylaws
(A-82)

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MISSOURI STATE MEDICAL ASSOCIATION

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Phenylephrine Hydrochloride	25 mg
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Ru-Tuss Tablets are an oral antihistaminic, nasal decongestant and anti-secretory preparation.

INDICATIONS AND USAGE Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues. Phenylephrine and phenylpropanolamine combine to exert a vasoconstrictive and decongestive action while chlorpheniramine maleate decreases the symptoms of watering eyes, post nasal drip and sneezing which may be associated with an allergic-like response. The belladonna alkaloids, hyoscyamine, atropine and scopolamine further augment the anti-secretory activity of Ru-Tuss Tablets.

CONTRAINDICATIONS Hypersensitivity to antihistamines or sympathomimetics. Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant. Concomitant use of MAO inhibitors is contraindicated

WARNINGS Ru-Tuss Tablets may cause drowsiness. Patients should be warned of the possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers

PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time. Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS Hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerotomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia. Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure

DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening. Not recommended for children under 12 years of age. Tablets are to be swallowed whole

HOW SUPPLIED:

Bottles of 100 Tablets	NDC 0524-0058-01
Bottles of 500 Tablets	NDC 0524-0058-05

Federal law prohibits dispensing without prescription.

DISTRIBUTED BY:
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MANUFACTURED BY:
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RU-TUSS®

Expectorant

DESCRIPTION

Each fluid ounce of Ru-Tuss Expectorant contains:

Codeine Phosphate	65.8 mg
(WARNING: MAY BE HABIT FORMING)	
Phenylephrine Hydrochloride	30 mg
Phenylpropanolamine Hydrochloride	20 mg
Pheniramine Maleate	20 mg
Pyrilamine Maleate	20 mg
Ammonium Chloride	200 mg
Alcohol	5%

Ru-Tuss Expectorant is an oral antifussive, antihistaminic, nasal decongestant and expectorant preparation.

INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis. Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold.

CONTRAINDICATIONS Hypersensitivity to antihistamines. Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated

Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant

WARNINGS Ru-Tuss Expectorant contains codeine phosphate, therefore, the patient should be warned of the potential that this drug may be habit forming. Ru-Tuss Expectorant may cause drowsiness. Patients should be warned of the possible additive effect caused by taking antihistamines with alcohol, hypnotics, sedatives and tranquilizers.

PRECAUTIONS Patients taking Ru-Tuss Expectorant should avoid driving a motor vehicle or operating dangerous machinery (See Warnings). Caution should be taken with patients having hypertension, diabetes, hyperthyroidism and cardiovascular disease.

Caution should also be used in patients with pulmonary, hepatic or renal insufficiency.

ADVERSE REACTIONS Ru-Tuss Expectorant may cause drowsiness, lassitude, giddiness, dryness of mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, and insomnia. Overdoses may cause restlessness, excitation, delirium, tremors, euphoria, metabolic acidosis, stupor, tachycardia and even convulsions.

DOSAGE AND ADMINISTRATION Adults: 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period

Children 6 to 12 years of age: ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period. Children 2 to 6 years of age: ½ teaspoonful every 4 hours, not no exceed 3 teaspoonfuls in any 24-hour period. Children under 2 years of age. Use as directed by a physician.

HOW SUPPLIED: (16 fl. oz.)

Pint Bottles	NDC 0524-1010-16

Federal law prohibits dispensing without prescription.

MANUFACTURED AND DISTRIBUTED BY:
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Shreveport, Louisiana 71106

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MSMA

NEWS ROUND - UP

February, 1982

MSMA Council suggests dues increase for 1983

At the MSMA Council meeting on February 6, in Columbia, Council approved a resolution to increase 1983 membership dues by $10. The resolution will go before the House of Delegates at their Annual Session, April 1-4, 1982, at the Hyatt Regency Hotel in Kansas City.

Carol F. Williams, M.D., treasurer, said, "With inflation at 10 percent we need this dues increase just to maintain."

In addition, she said the Committee on Long Range Planning will be meeting this fall to look at more creative association programs, which may require further dues increases. These programs will be brought before the House of Delegates in April, 1983.

At $125 per year, MSMA has the lowest state association dues in the nation.

In other actions, the Council:

- Announced that Medicaid has terminated its contract with the PSRO. Dr. E. T. Hansbrough, MSMA President, appointed the following committee to review problem cases: Drs. Charles Jobe, Springfield; James Carter, Kansas City; Charles Landsbaum, Jefferson City; Pat Harr, Maryville; Fred Caldwell, Poplar Bluff; and Paul Friedman, St. Louis.
- Voted not to install a WATS line at MSMA Headquarters.
- Approved placing members telephone numbers in MSMA's *Annual Directory.*
- Established a committee to study the Missouri State Medical Foundation with emphasis on the rate structure and the possibility of it becoming self-sustaining and eliminating annual assessment. On that committee are the following members: Drs. Max Franklin, St. Louis; E. T. Hansbrough, Poplar Bluff; Marvin A. Singleton, Joplin; Gary A. Dyer, St. Joseph; and Ronald A. Youmans, Kansas City.
- Approved the report of the Committee on Legislative Affairs regarding the progress of bills before the 1982 Missouri General Assembly.
- Appointed Dr. Jordan W. Burkey of Springfield as editor of *Missouri Medicine.* Dr. Bruce Stoliar of St. Louis will be associate editor.
- Voted to present the first MSMA Award for Citizenship and Community Service to Dr. Durwood G. Hall of Springfield. The award will be given at the 1982 Annual Session of the MSMA House of Delegates.
- Heard reports from Dr. Mohammad Akhter, director of the Missouri Division of Health, and Sharon Marcum, assistant director of the Missouri State Department of Social Services.
- Heard and accepted reports from MOMEDICO, Commission on Economics, Commission on Medical-Legal Affairs and MSMA Auxiliary.
- Agreed to submit a resolution to the House of Delegates asking the Board of Directors of the Missouri Health Data Co. to notify MSMA of their plans in protecting the confidentiality of their medical data.
- Voted to submit a resolution to the House of Delegates asking that a Medicine/Business Coalition be established.
- Approved submitting Dr. Paul Anderson, of Neosho, as a nominee to the State Board of Registration for the Healing Arts.

S.S. reviews recipients

Physicians should expect a substantial increase in requests for medical reports as Social Security begins a review of the four million people receiving disability benefits. As many as 150,000 people could be dropped from the program this fiscal year. A 1980 law requires Social Security, as of last month, to review nearly every disability case at least once every three years.

Social Security urges physicians to inform their patients that the decision on whether the patient is disabled is made by the state disability officers and not by the physician.

Plans underway for 124th Annual Session

The Preliminary Program is being prepared for the 124th Annual Session of the Missouri State Medical Association. The 1982 Session will convene April 1-4 at the Hyatt Regency Hotel in Kansas City.

Beginning on Friday morning, April 2, and continuing through Saturday afternoon, 24 Continuing Medical Education sessions will be offered. All CME sessions are approved by MSMA and the American Academy of Family Physicians. There are 17 medical societies and two voluntary health organizations sponsoring the CME sessions.

There will be two featured speakers at the opening General Session on Friday, April 2. Wilfred E. Wooldridge, M.D., Springfield, will speak on the topic, "The Historical Background of Where American Medicine Is Today and How It Got There." Dr. Wooldridge is editor of MSMA's *Missouri Medicine.*

Discussing "Current AMA Activities," will be John H. Coury, Jr., M.D. Dr. Coury, from Port Huron, Michigan, is Vice Chairman of the American Medical Association's Board of Trustees.

This month, all MSMA members will be receiving copies of the Preliminary Program and registration materials.

Legislators look at rewording 'chiro' statutes

This Missouri General Assembly is sailing through its current "short" Session and several bills of interest to medicine are apparently in the mainstream. The Session, which began the first week of January, will end April 30.

Senate Bill 520, which would update the language in the chiropractic statutes and expand their practice somewhat, has been reported Do Pass by Committee and is awaiting floor action by the full Senate. After a wide-open chiropractic bill passed the Legislature in 1981, the Governor vetoed the measure. In his veto message, the Governor stated that the Legislature needed to relook at the 1927 chiropractic statutes and come up with more acceptable language. The present Substitute for SB 520 is a compromise bill which carries several MSMA amendments.

Another bill which has cleared Committee and is awaiting floor action is House Bill 1223, which would include brain death as a method of determining when death occurs. The Association has long been in support of this legislation to relieve liability questions in brain death cases.

Added emphasis has been placed this year on the licensing of allied health personnel. Bills have been introduced to license radiologic technicians, occupational therapists, physician assistants, physical therapy assistants and many others. Since the State is in financial straits and the Legislature is not even considering expenditure bills, many lawmakers turn their sights to legislation which supposedly would not cost government new funds. Advocates of licensure bills have seized this opportunity by hiring lobbyists and sending large delegations to the Capitol.

The MSMA is on record as opposing licensure of additional health care personnel at this time since such licensure results in a shortage of individuals who can perform certain tasks and, ultimately, higher health care costs. Each licensure bill carves out a specialized service which could only be performed by a licensed person.

Other major bills before the General Assembly and MSMA's position include:

SB 481, which increases the threshold for Certificates-of-Need from the present $150,000 to $600,000 for capital expenditures and $400,000 for medical equipment and services. (Support)

SB 717, which reorganizes the Ellis Fischel Hospital in an effort to increase its efficiency as a cancer center. (Support)

HB 990, which would require the losing party in a medical malpractice suit to pay the costs of the prevailing party. (Support)

HB 1026, which would outlaw the production or sale of simulated controlled substances, or "Kiddie Dope." (Support)

HB 1345, which would require approved child auto restraints for children under four-years-old riding in a parent's or guardian's vehicle. (Support)

HB 1652, which would place in statutes a patient's right to access to his/her medical records. (Amendments needed)

In all, more than 170 bills of interest to medicine to varying degrees have been introduced this year. As the Session progresses, updates will be provided to members. Members are encouraged to contact their Legislators and the MSMA regarding legislative matters.

The MSMA has "Key Contacts" on about 60% of the members of the General Assembly. If members are willing to act as a "Key Contact" in providing medicine's views to Legislators, they should contact the "Key Contact" Program, MSMA, P.O. Box 1028, Jefferson City, Mo. 65101.

AMA brochure outlines changes in medicare law

"Physicians Fees Under Medicare," a brochure prepared by the AMA's Council on Medical Service, has been revised to reflect 1981 changes in the Medicare law. The publication answers the questions frequently asked by physicians about the methods used by Medicare to establish fee profiles and levels of reimbursement. For a single copy of the brochure write to Dept. of Health Care Financing and Organization, American Medical Association, 535 N. Dearborn St., Chicago, Illinois 60610.

George Ladyman appointed to State Board of Registration

George H. Ladyman, M.D., of Poplar Bluff, was recently appointed to the Missouri State Board of Registration for the Healing Arts. Dr. Ladyman also serves MSMA as Councilor from the 10th District.

The State Board is responsible for licensure and disciplinary actions concerning Missouri physicians. The Board of Registration for the Healing Arts can be contacted by writing 3523 N. Ten Mile Drive, Jefferson City, MO 65101 or by calling (314) 751-2334.

Medicarers pay $80 more on hospitalization

As of January 1, 1982, the nation's 29 million citizens currently on Medicare now have to pay the first $260 of any hospital stay. Medicare patients previously paid the first $180.

Other Medicare increases that went up involve co-insurance amounts. The co-insurance increases are as follows:

- The co-insurance amount of a day of inpatient hospital services from the 61st through the 90th day will be $65, increased from $52. The co-insurance amount for a lifetime reserve day will be $130, up from $104. This applies to both High and Low Option benefits.
- The co-insurance amount for the 21st through the 100th day of a skilled nursing facility (SNF) stay will be $32.50, up $6.50.

Mark your calendar

March 1	Hemophilia Month
March 1	National Nutrition Month
March 1-7	National Physical Education and Sport Week
March 7-13	Help Someone See Week
March 7-13	Save Your Vision Week
March 21-27	National Poison Prevention Week
March 30	Doctors' Day

November CPI shows physicians services up 1.1%

According to the Consumer Price Index, charges for physicians' services rose at a rate of 1.1% in November, exceeding the rate of increase in the all-items index (.3%) and all-services index (.6%). During the month prices for prescription drugs rose .6%, costs for dental services went up .3%, and hospital room charges increased at a 2.5% rate. Over the 12-month period ending in November, physicians' fees increased at a rate of 12%. The all-services component of the CPI went up 14.1% and the all-items component rose 9.6%. The 12-month rate of increase was 12.5% for prescription drugs, 16.9% for hospital room charges and 9.8% for dental services.

Change up for final vote

At the 1981 Annual Session, the House of Delegates of the Missouri State Medical Association voted to discontinue the Interim Session of the House. In so voting, one change in the MSMA Constitution was overlooked. This oversight was presented by the Committee on Constitution and By-Laws at the Annual Session for final vote at the 1982 Annual Session. (bracketed words are deleted).

Article XI. Amendments

> The House of Delegates may amend any article of the constitution by a two-thirds vote of the delegates present and voting in any Annual [or Interim] Session, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

Kastan sits on AMA Council

Michael B. Kastan, a medical student at Washington University, in University City, was recently appointed to the AMA Council on Scientific Affairs by the AMA Board of Trustees.

The Council collects and evaluates technical information for dissemination to the medical profession and maintains liaison between representatives and organizations of the medical profession.

Higher fees structure strengthens Registration Board

The Board of Healing Arts recently released a report of 1979-81 completed board actions.

"Understaffed, inadequately financed, and the recipient of more and more responsibilities, the Board has been forced to become more and more reactive and less and less pro-active in dealing with issues that come before it," says Gary R. Clark, executive secretary. "Little or no attention has been paid to the Board's resource situation since 1959."

Last summer, passage of Senate Bill 16 by the Missouri General Assembly authorized the State Board of Registration for the Healing Arts to raise licensure fees charged by the board. The Board is self-supporting through the monies paid by Missouri's physicians in examination fees, renewal of certificate fees, fees for licensing by reciprocity, etc.

The new fees, which go into effect in fiscal year 1983, are estimated to generate an income of $1,102,540 a year. The current fees bring in approximately $400,000 yearly.

"The state is set to correct the resource deficiencies," says Clark. With continued cooperation, over the next few years, it will be possible to strengthen the operation of the Board of Healing Arts.

Action directed by State Board of Healing Arts

	1978	1979	1980	1981
Revocations	2	1	2	5
Probation	7	7	12	11
Voluntary Surrender	8	8	13	7
Reinstatements	1	2	2	8
Impaired Physician	0	3	0	0
Suspension	0	0	0	3
Injunction	0	0	5	3
Other	3	6	20	21
Closed	8	33	44	26
Total	29	60	98	84

Note: The category "Other" includes reprimands, both verbal and written, referrals to other agencies, etc.

AMA develops Patient Medication Instructions

The American Medical Association is developing a Patient Medication Instructions (AMA-PMI) program through which written information about certain drugs will be made available to physicians for distribution, along with prescriptions to their patients. The Association anticipates that the written information will reinforce the physician's oral instructions to the patient and will enhance consumers' knowledge about the drugs they are taking.

Although the program will be conducted solely by the AMA, Association staff members have met with representatives of the American Pharmaceutical Association, the pharmaceutical industry and the U.S. Food & Drug Administration to explore mutual interest in the development of the Patient Medication Instructions program.

Initially, AMA-PMIs will be written for 10 of the most widely prescribed medications, both single entity drugs and combinations, and, in time, will cover 200 widely used drugs. For single entity drugs, the generic name will be the principle identifying designation and, whenever practical, the most widely known trade names will be included. The AMA-PMIs also will include common, documented side effects.

Plans call for the first group of AMA-PMIs to be available to physicians in the spring of 1982.

PR Update

This month 150 radio stations around the state will be receiving four public service announcements produced by the Missouri State Medical Association. The PSAs cover multiple sclerosis, sunlamps and eye injury, sore throats and winter walking.

All MSMA members are encouraged to listen for these tapes on their favorite radio stations and make personal requests for their airing. Announcements are distributed quarterly to all Missouri radio stations.

In addition, the production of three television public service announcements, which contain the MSMA logo, should be completed this month. The subjects include: teenage smoking, adult alcohol abuse and health care cost containment.

Wise use of health care, topic of MSMA brochure

"Studies have shown that 60 cents of every health dollar goes to treat tobacco or alcohol related illnesses." That is the type of information your patients will receive in MSMA's brochure, "You and Your Physician — Partners in Reducing Health Care Costs."

Among the tips offered in "You and Your Physician" are suggestions about following doctors' advice, taking prescribed medications, using emergency rooms and understanding rising health care costs.

This past month, MSMA received more requests for this colorful brochure. Order forms were recently distributed with membership cards.

MSMA makes this educational brochure available to your patients, at cost, for 10 cents each. If you should misplace your order blank, write or call: MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

MSMA seminar focuses on building a medical practice

Residents and physicians who are leaving the military are encouraged to sign up now for a two-day "Establishing Yourself in Medical Practice" workshop, sponsored by the MSMA. The seminar will be held April 14-16 at the St. Louis Airport Marriott Hotel.

The program is geared to help physicians start and build a rewarding practice, while minimizing frustrations and costly errors. Each participant will receive a workbook filled with practical information to be used later as a reference guide.

Presenting the program is Conomikes Associates, Inc., a nationally recognized medical management consulting firm.

The workshop covers such areas as personnel, financing your practice, medical records, economic and legal aspects and practice-building.

For more information, contact MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Governor asks physicians to evaluate state regulations

In an effort to develop a positive working atmosphere for physicians who work with the state government, Governor Christopher Bond has asked MSMA members to evaluate state regulations that relate to the medical profession. Through this evaluation process, the governor's staff hopes to update rules and regulations that operate unfairly and/or cause unnecessary delays in paperwork.

Send your evaluations and recommendations to MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Dear Governor Bond,

I have encountered problems with a state regulation involving:

Sincerely,

MSMA Member

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints (black and white) or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

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All material other than scientific should be received prior to the first of the month preceding month of publication.

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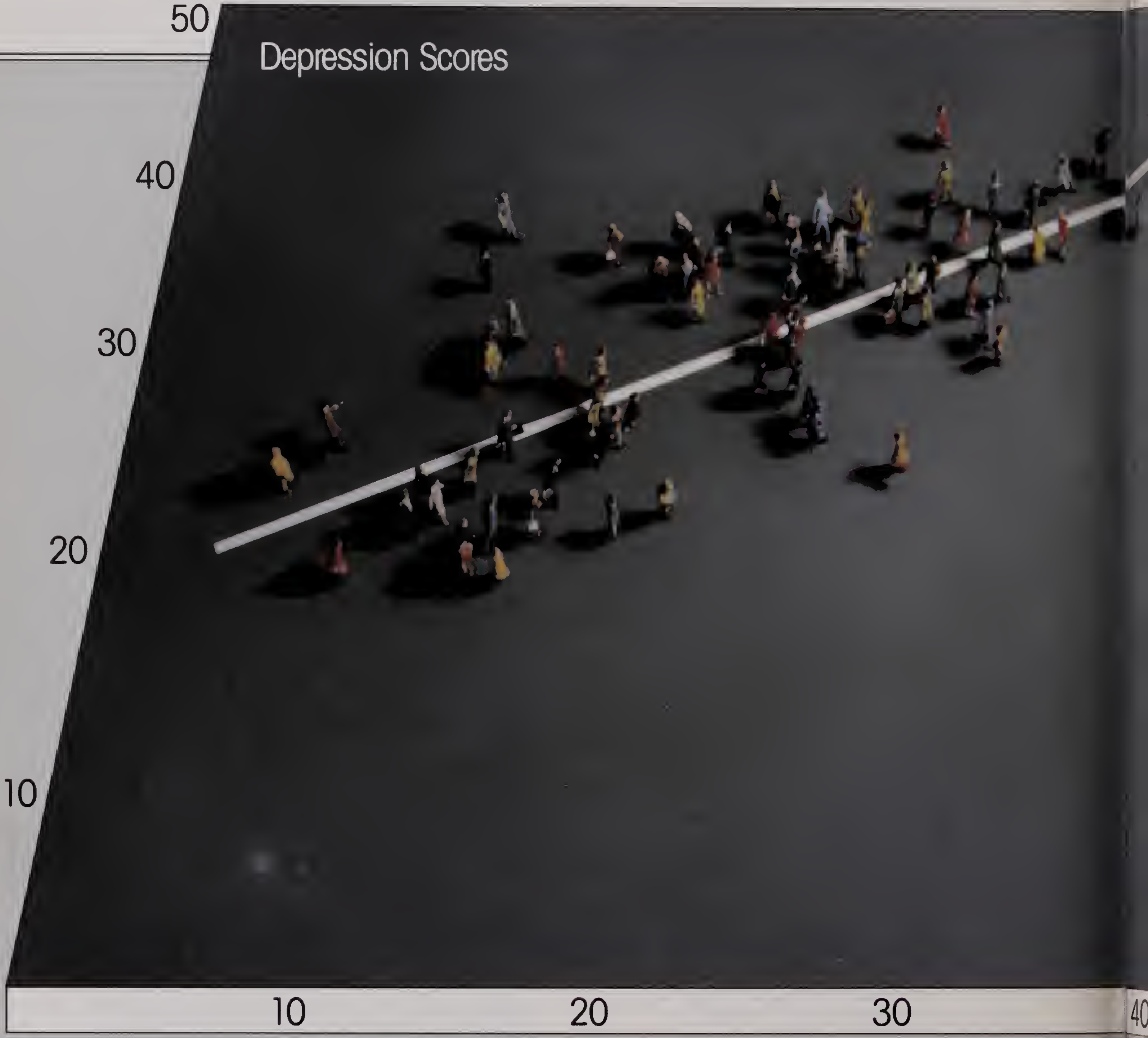
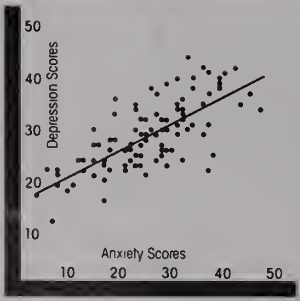
FOR THE 7 OF 10 NONPSYCHOTIC





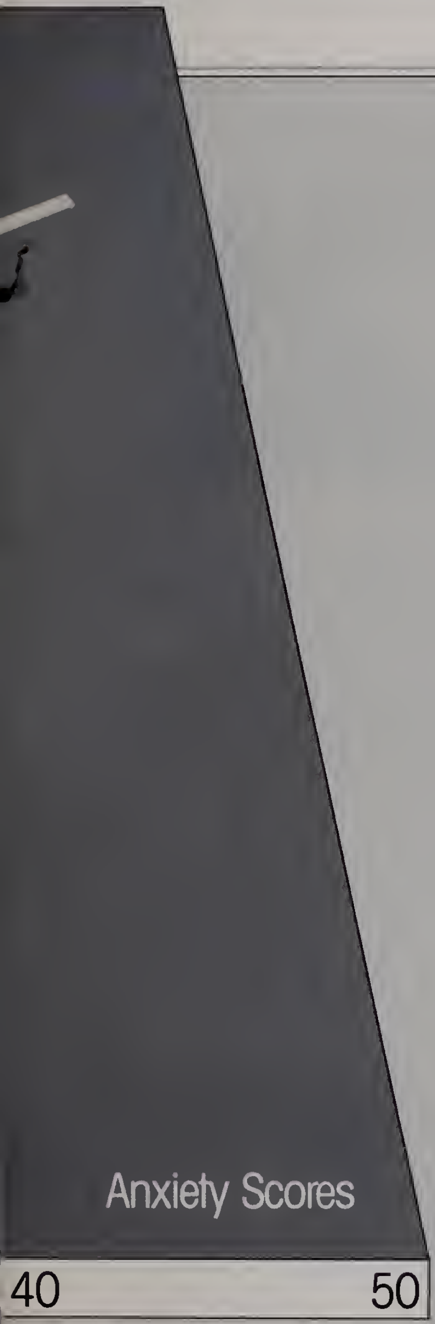
Clear correlation between anxiety and depression[3]

The above graph illustrates a relationship between anxiety and depression, indicating that patients seldom present with anxiety or depression alone; more often they have both in varying degrees. Data based on a sampling of 100 outpatients (64 male; 36 female) seen at a general psychiatric clinic.

[3] Adopted from Claghorn, J. The anxiety-depression syndrome. *Psychosomatics 11*:438-441, Sept-Oct 1970.

ROCHE

DEPRESSED PATIENTS WHO ARE ALSO ANXIOUS[1,2]



Most depressed patients are also anxious...

Some authors estimate that 70% of all nonpsychotic patients with symptoms of depression have concomitant symptoms of anxiety.[1,2] One author found a distinct correlation between anxiety and depression scores in 100 nonpsychotic outpatients administered the Minnesota Multiphasic Personality Inventory in a general psychiatric clinic.[3] As depression scores increased, so did anxiety scores. No attempt was made to select patients other than to exclude psychotics.

but not psychotic

The logic of treating both components of anxious depression is clear. Antipsychotics, like the phenothiazines, however, carry a well-documented risk of tardive dyskinesia.[4] Because of this, an APA Task Force recently recommended the judicious use of phenothiazines in cases other than chronic psychosis or the use of alternative treatments.

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References: **1.** Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine*, ed. Jarvik ME. New York, Appleton-Century-Crofts, 1977, p. 316. **2.** Schatzberg AF, Cole JO: Benzodiazepines in depressive disorders. *Arch Gen Psychiatry 35*:1359-1365, 1978. **3.** Clagharn J: The anxiety-depression syndrome. *Psychosomatics 11*:438-441, 1970. **4.** The Task Force on Late Neurological Effects of Antipsychotic Drugs: Tardive dyskinesia, summary of a task force report of the American Psychiatric Association. *Am J Psychiatry 137*:1163-1172, 1980. **5.** Feighner JP *et al*: A placebo-controlled multicenter trial of Limbitrol versus its components (amitriptyline and chlordiazepoxide) in the symptomatic treatment of depressive illness. *Psychopharmacology 61*:217-225, 1979.

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e g , operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)

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Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely

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Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido

Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns

Anticholinergic Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract

Allergic Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus

Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia

Gastrointestinal Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue

Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels

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Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment

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Jury awards $7 million to girl for brain damage in surgery

RIVERHEAD, N.Y. (UPI) — A jury in state Supreme Court here awarded $7.1 million in damages Friday to a 10-year-old girl who suffered irreversible brain damage during a 1973 nsillectomy.

Anita

cessive dose of anesthetic during the surgery caused a heart stoppage that deprived her brain of oxygen.

Shandell said the girl was mildly retarded but educable at the time of the operation and also had a heart defect.

It was charged that the
ician, Dr. Mal-
ylon,
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Suit nets doctor $2 millio

BALTIMORE (AP) — An eye surgeon who sue
Iopkins Hospital has been awarded $2 millio
argest malpractice judgment ever granted in Ma
Dr. James W. Lehninger, formerly of Baltim
ontended an improper diagnosis of a hip inj
ented him from practicing his profession, was
he judgment Monday by a city jury.
He told the jury he would lose an estimated
on in income because he could not pursue his
a opthalmologic surgeon.

$2 million awarded to girl

PROVIDENCE, R.I. (UPI) — A judge ord
eral government Tuesday to pay $2.1 millio
the-clock care of a paralyzed, retarded girl
but does not live" because of a Navy doct
tice.
Karla Foskey, 8, will never be ble to
hold a job. She requires 24
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Woman wins $9 million suit for nose job

The Associated Press

CHICAGO — A woman left a speechless quadraplegic after cosmetic su
gery on

must pay damages

Texas (AP) — A federal court jury s.
to pay $1.5 million damages to is
th brain damage.
day that

Award tops $4 millio

LITTLE ROCK (AP) — A Saline County
y has awarded a Benton couple $4.07
rsonal injury lawsuit.
Georgia and Robert Huchingson of Be
wsuit against Little Rock Anesthesia
irco Inc., manufacturer of a ventilator
l operating rooms.
Mrs. Huchingson, 65, had surgery to re
tumor in May 1980 at St. Vincent's Infir
Rock. She was given oxygen and a
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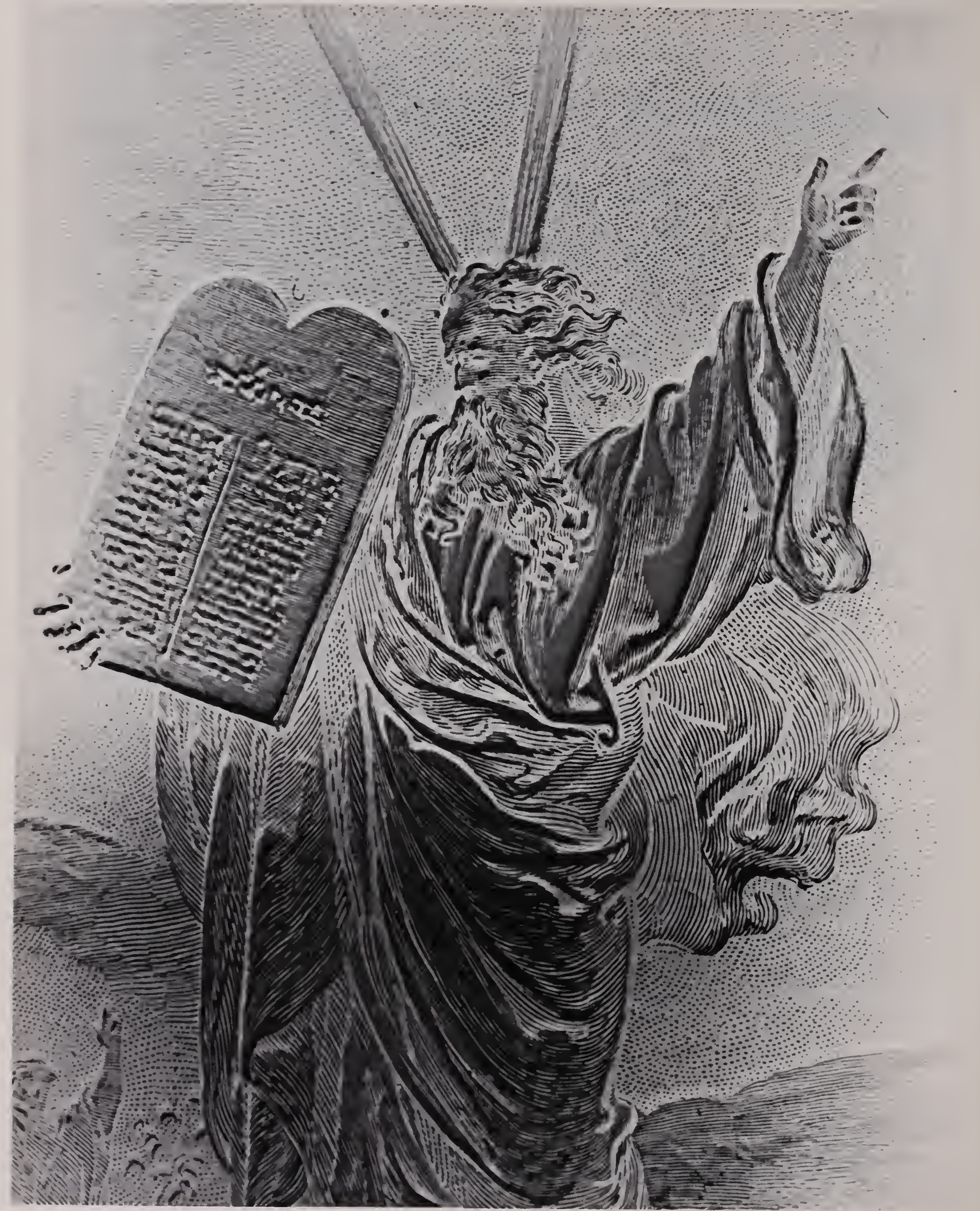


"Here are ten new ones."

Editor's Corner

TEN COMMANDMENTS FOR A YOUNG MAN BEGINNING PRACTICE

Those of us who have skirmished in the field day after day, and have our share of bloody heads, have all drawn up private lists of rules for daily conduct. Often we are powerless to enforce these rules but we know their validity.

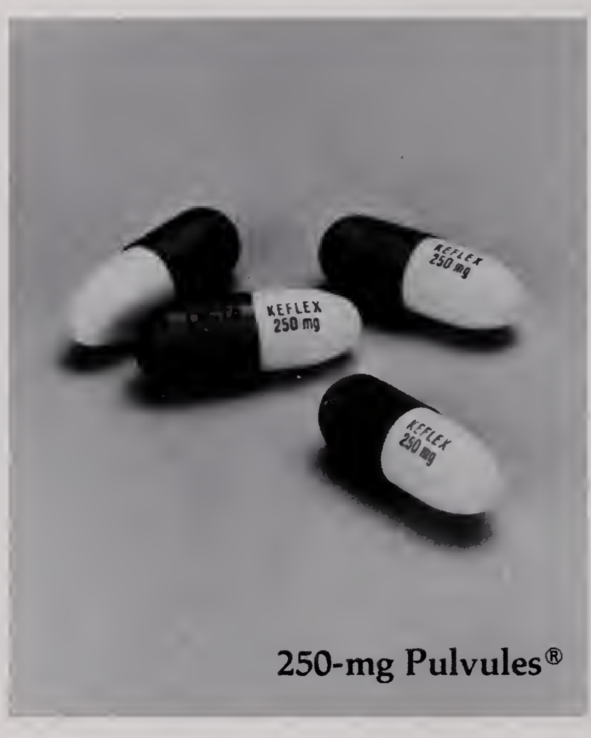
Of course, rules will vary from person to person, depending on temperament, but I believe the buffeting of every day exposure will result in surprising unanimity because people are everywhere the same.

How grateful I would have been for such a list when I opened my office 30 years ago! Or, possibly, I might have read and pooh-poohed it as most of you early in practice will do now. My hope, however, is that, here and there, is the bright young man capable of listening to the still, small voice of experience and who will thus save himself many battle scars:

1) Shun thy friends and relatives as patients. They will forever twist thy arm until it hurts.
2) Forget not that a pickle-faced receptionist will do thee in, for thy patients see her before thee.
3) When a telephone call for thee comes from a person who will not be identified hasten to the bathroom and remain there as long as possible.
4) Honor thy Father, for human nature has not changed since he was young.
5) Honor thy Mother, for her gentle wisdom will temper thy Father's rude answers.
6) Ever remember that concern, compassion and communication will cure more people than cortisone.
7) A grateful patient without funds is worth more than ten who are wealthy and unhappy with thee.
8) Beware of most long-term employees. They will either degenerate into sloth or will become officious with age.
9) Whenever a patient praises thee overmuch, keep thy malpractice policy at hand.
10) Abhor the Federal Government. It is an instrument of Satan, the friend of no man and, least of all, of thee.

Bonus. Never, never, *NEVER* check the appointment book. There is sure to be a disturbing name on it.

easy to take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Missouri Medicine

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Special Review Article

J. NED SMITH, M.D., *Columbia*

Extracolonic Manifestations of Ulcerative Colitis

A LARGE NUMBER of extracolonic manifestations occur with ulcerative colitis. Patients may go to their physician because of these manifestations rather than because of the ulcerative colitis.

Skin. Occasionally, patients seek medical attention for skin lesions, the underlying cause of which is ulcerative colitis. Erythema nodosum is the most common skin lesion. Approximately 3% of ulcerative colitis will develop erythema nodosum.[1] It occurs more commonly in women than men. It has received particular attention in the literature.[2] The lesions are light red nodules, round-tipped or oval-shape, tender and characteristically on the anterior aspect of the legs. Typically, they correlate with, but may precede, an active state of inflammation in the bowel. The lesions do not correlate with severity of the ulcerative colitis. It is of interest that in two of the 12 patients reported by Kelley,[3] the chest X-rays showed increased hilar markings coinciding with erythema nodosum with hilar enlargement in situations other than ulcerative colitis. Peripheral arthritis may occur at the same time as the lesions of erythema nodosum. The skin improves with satisfactory treatment of the ulcerative colitis. Erythema multiforme is seen less commonly; it may be seen coincidentally with erythema nodosum.

Aphthous ulcers and *stomatitis* also occur with active inflammatory bowel disease. The lesions are more common with severe attacks. Therapy is again directed toward the primary illness.

The most severe skin lesion associated with ulcerative colitis is the uncommon lesion of *pyoderma gangrenosum*. It occurs in 1% to 4% of patients.[1] The lesions first appear similar to severe acne; they drain sterile, purulent-appearing material. Without treatment, the lesions may become necrotic or gangrenous. Pyoderma gangrenosum generally occurs in severe ulcerative colitis, but it may be seen with mild disease. Intense medical or surgical therapy is indicated because it may be a most tenacious complication of the primary bowel disease. Edwards and Truelove describe a patient who responded to 240 mg of prednisolone a day. We had a resident physician with ulcerative colitis who responded to a combination of ACTH and 80 mg of prednisone. His disease has now been in remission for more than ten years. Another patient had a subtotal colectomy, but pyoderma gangrenosum occurred secondary to ulcerative colitis in the remaining rectum. Treatment was prolonged and included both corticosteriods and removal of the rectum.

Other skin lesions seen with ulcerative colitis include maculopapular eruptions and urticaria. Rarely, a patient will have a generalized eczematoid macular papular eruption appearing with an exacerbation of the colitis. Necrotizing cutaneous vasculitis producing digital gangrene also has been reported (Cello and Myer).

Clubbing of the Fingers. Sixteen of 245 patients with ulcerative colitis reviewed by Banks[4] had clubbing of the fingers. We have seen one boy who, at first, denied having diarrhea. Because of the clubbing of the fingers, proctoscopy was performed and a diagnosis of ulcerative colitis made. Re-questioning then brought out a history of hemorrhagic diarrhea.

Ocular Lesions. Korelitz and Coles[5] review experiences with iritis (non-granulomatous anterior uveitis) at Mount Sinai Hospital in New York. Iritis occurred in 13 of 414 patients with ulcerative colitis or granulomatous colitis. In eight cases, the bowel disease extended from the rectum to the cecum and usually included the ileum; however, as with pyoderma gangrenosum, ulcerative proctitis alone may be associated with iritis. About 75% of patients who have iritis with ulcerative colitis will have other systemic complications of the diseases as well. Symptoms are blurred vision, eye pain, photophobia and headache. Examination of the eye reveals such features as ciliary congestion, extreme turbidity of the aqueous and many iridic adhesions that can be easily ruptured. In the Korelitz and Coles series, arthritic complications occurred in 11 patients and erythema nodosum in five of the 13 patients. Two patients became blind and one died of amyloidosis. In four cases, uveitis preceded the onset of ulcerative colitis. In three patients with proctocolectomy, there has been no relapse of their iritis. Corticosteroid therapy may have a beneficial effect on the iritis as well as the colitis. In this situation, local treatment of the eye may completely control the iritis. Iritis supports other indications for colectomy, but in only one case (in the Mt. Sinai Hospital report) did the iritis serve as the primary indication for surgery.

Episcleritis is uncommon. It is usually bilateral and involves only a small part of the episclera area in each eye. There is discomfort but no discharge of infection.

Conjunctivitis is noted in 20 of 624 patients in the report by Edwards and Truelove.[6]

Arthritis. By definition, colitic arthritic patients have inflammatory bowel disease and a negative reaction to the agglutination tests for rheumatoid arthritis. If the rheumatoid tests are positive, the patients are considered to have rheumatoid arthritis along with their bowel disease. Definite colitic arthritis occurs in 15% to 20% of patients with inflammatory bowel disease.[7] Of this group, approximately 15% have peripheral arthritis.[8]

The usual form of peripheral arthritis is a migratory arthritis of the large joints. However, involvement of a single joint is common. Attacks usually accompany a flare in the inflammatory bowel disease and are acute. Synovitis is a common finding with red, swollen and frequently tender joints. Arthritis tends to involve larger joints more than smaller joints. It does not often involve the joint cartilage and bony appositions so that little residual damage is suffered. Treatment with corticosteriods helps the bowel inflammation and arthritis simultaneously.

Ankylosing Spondylitis. The statistics in regard to ulcerative colitis and ankylosing spondylitis are confusing but the situation appears as follows:

(1) McEwen *et al*[8] found clinical ankylosing spondylitis to comprise about 25% of the total of arthritis patients seen with ulcerative colitis; again definite arthritis was seen in about 15% of the total colitis group. Clinically, this is probably the correct perspective for the occurrence of spondylitis in inflammatory bowel disease.

(2) However, if the radiologist takes special films and looks carefully for the earliest radiological signs of ankylosing spondylitis, evidence of the disorder runs as high as 18%.[9]

(3) Conversely, if all patients with spondylitis are carefully screened for inflammatory bowel disease, the incidence is 17% to 18%.

(4) Also, ankylosing spondylitis is more common than expected in blood relatives of patients with inflammatory bowel disease.

(5) The histocompatibility antigen phenotype HLA-B27 is increased in patients with ankylosing spondylitis associated with ulcerative colitis since it is found in about 80% of patients. In one study,[10] none of the 29 patients with inflammatory bowel disease and peripheral arthritis had the B27 antigen.

The course of ankylosing spondylitis tends to be slowly progressive. Corticosteriods do not provide the benefit seen in peripheral colitic arthritis, and colectomy likewise is not helpful. The treatment of arthritis is similar to treatment of spondylitis without inflammatory bowel disease.

Hepatic Disease. Liver disease is one of the most important of the extracolonic manifestations of ulcerative colitis. It occurs in about 7% of the patients.

Fatty Liver. Increased fat in the liver is a prominent finding in autopsy series and in patients coming to colectomy.[11] It is associated with severe ulcerative colitis involving most or all of the colon; it is a result of malnutrition, anemia and/or toxemia. Liver biopsy shows fatty infiltration in about 40% of patients with ulcerative colitis. The liver enzymes may or may not be elevated in fatty livers associated with ulcerative colitis. The fat is transient and disappears with clinical improvement. It does not lead to cirrhosis.

Pericholangitis. Eade[12] states that the inflammation in "pericholangitis" first surrounds the portal vein and suggests triaditis as a preferable term. The inflammation involves the whole portal tract and may subsequently localize in the junctional area between portal tracts and hepatic lobules or it may extend into the interlobular areas between portal tracts. Increased portal fibrosis may be the end result. In its end stage, it assumes the histological form of post necrotic cirrhosis.

Brooke *et al*[13] and Eade[12] suggest that the liver inflammation in pericholangitis is a result of bacteremia in the portal vein coming from the clinically diseased colon. However, cultures of liver biopsies in patients with pericholangitis have been negative. Tetracycline is ineffective.

Hepatitis. Post transfusion hepatitis and liver disease in ulcerative colitis patients are stressed in the older literatures. Now, it is not considered a common problem. However, chronic active hepatitis is a recognized problem. In 1961, Wilcox and Isselbacher described a group of 33 patients with liver disease at Massachusetts General Hospital and seven had ulcerative colitis. In five, the hepatitis preceded ulcerative colitis. Mistilis[14] reported eight patients with chronic active hepatitis and associated postnecrotic cirrhosis. Bayless and Boitnott[15] discuss chronic active hepatitis in ulcerative colitis and suggest that an immunologic mechanism contributes to the liver disease. It is a second known cause of cirrhosis.

Primary Sclerosing Cholangitis. This rare complication of chronic ulcerative colitis refers to a localized or diffuse disorder of the biliary tract in which the common bile duct may be narrowed to several millimeters in diameter. Patients have symptoms similar to acute cholecystitis with recurring fever, jaundice and leukocytosis.[16] One of our patients had surgical correction of constriction of the common duct but, nevertheless, died four years later in hepatic coma. This condition may result in secondary biliary cirrhosis.

Carcinoma of the Bile Duct. Carcinoma of the biliary tract is difficult to differentiate clinically from primary sclerosing cholangitis. It occurs in about 0.5% of patients with ulcerative colitis. Fifteen well documented cases of biliary tract carcinoma associated with ulcerative colitis were reported by Richie *et al*.[17] Most had a long history of ulcerative colitis and total involvement of the colon.

Ulcerative colitis may be associated with a large number of systemic manifestations occurring in portions of the body outside of the colon. The author reviews the literature on this subject and includes comments about experiences at the University of Missouri-Columbia hospitals.

Dr. Smith is Professor in the Division of Gastroenterology and Liver Diseases, Department of Internal Medicine at the University.

A question arises with combined liver disease and ulcerative colitis. Is it beneficial to perform colectomy in an effort to prevent additional liver disease? Eade[12] reported a series of 138 patients with combined liver disease and inflammatory bowel disease who had been treated with proctocolectomy. An attempt was made to follow the cases and 33 patients had a subsequent liver biopsy (where biopsy was indicated because of a doubtful liver status). There was considerable improvement in comparing postcolectomy biopsies with wedge biopsies performed at the time of surgery. Eade[12] concludes that "progressive liver disease will usually advance the optimum moment for total colectomy but will rarely, if ever, be the sole cause for such a decision." This is still the opinion today.

Hematology. The number of patients with anemia has decreased with improved medical and surgical therapy for ulcerative colitis. The anemia is usually from blood loss and is an iron deficiency anemia.[18] Anemia of chronic disease also occurs. Folate and vitamin B_{12} deficiency may occur in patients with extensive small bowel disease. A Coombs-positive anemia is a rare complication.[19] Sulfasalazine (Azulfidine) is a more common cause of hemolytic anemia.[20] Heinz bodies (irregularly shaped refractile granules seen in wet unstained preparations) occur in this hemolytic anemia. Leukocytosis and thrombocytosis may be seen in ill patients. A prolonged prothrombin time responsive to vitamin K also may be seen in severely ill patients. Rinaldo[21] described a low prothrombin consumption time and prothrombin time in patients with severe ulcerative colitis.

Thromboembolic Disease. Thromboembolism was the cause of two of 131 deaths during the period of 1931 to 1966 reported by Morowitz and Kirsner.[22] Association of inflammatory bowel disease and large vascular lesions is discussed by Yassinger *et al*.[23] The patients can develop a nodular vasculitis which can be associated with thrombosis of diffuse smaller arteries including retinal and cranial vessels. Marveux and Fahn[24] reported strokes in three young patients who had ulcerative colitis; a bibliography in regard to thrombophlebitis, embolism and arterial disease is presented by these authors. However, in a recent review of 711 patients of extraintestinal complications, thromboembolism is not mentioned.[25]

Growth Retardation. Eighteen percent of 130 children with ulcerative colitis showed decreased height in the report by McCaffery *et al*.[26] Retarded growth was more common in boys than in girls who became ill before age 14. The changes in growth rate usually preceded corticosteroid therapy. Colon resection is usually followed by increased growth.

Amyloidosis. Amyloidosis is a rare complication of ulcerative colitis. However, Forshaw and Moorehouse report two cases. The amyloid involvement is of the secondary type and involves primarily the liver, kidney and spleen. Blood vessels in any part of the body may be involved. Hepatosplenomegaly and proteinuria are usually found. The endocrine system may be involved. Especially think of amyloidosis when the nephrotic syndrome develops in association with ulcerative colitis.

Renal Disease. Amyloidosis with renal involvement has just been mentioned. *Pyelonephritis* occurs in 2% to 4% of patients with ulcerative colitis.

Maratka and Nedbal reviewed the incidence of *urinary calculi* in ulcerative colitis.[27] There were ten cases among 512 patients reviewed, but nine of these occurred in the 74 who had an ileostomy. Loss of water and sodium from the ileostomy favors scanty urine, urine of low pH and a greater likelihood of precipitating uric acid stones. The percentage of uric acid stones following colectomy is about 50% of all urinary stones compared to an incidence of 10% in the normal population.

Finally, an occasional patient has a severe diarrhea secondary to ulcerative colitis or a malfunctioning ileostomy to lose enough potassium over a period of time to develop *hypokalemic nephropathy*. The damage is permanent and progressive.

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S. SALMASSI, M.D., J. PARKER LaBACH, M.D.
and J. AMINI, M.D., *Kansas City*

Pulmonary Cancer of Triple Cell Differentiation With Sarcoid Reaction

Case Report

THE PLEOMORPHISM OF LUNG TUMORS is well accepted and the existence of histologically well and poorly differentiated areas within a tissue specimen or even the coexistence of multiple discrete histologic subtypes is not uncommon. The association, moreover, of small-cell anaplastic and squamous-cell lung cancer has been reported as a 24% prevalence of such an association in an autopsy series.[1]

Multiple lung tumors are usually observed at different times in the same individual instead of appearing simultaneously. Merrick *et al*[2] studied 15 cases, two of which were synchronous tumors of two cell types and four of which were metachronous tumors of two to three cell types at five- to 12-year intervals. The rest were metachronous tumors of the same type with time intervals varying from six to 15 years.

This study shows that synchronous tumors comprise about 13% of the multiple lung primary tumors. The coexistence of lung tumors classified as anaplastic large-cell and squamous carcinoma, squamous and adenocarcinoma,[3] malignant melanoma and small cell carcinoma,[4] primary lung and secondary carcinoma to the lung,[5] and double lung primary cancers[6] has been reported, too. Our case seems to be the most unusual type of multiple synchronous pulmonary cancer since it shows the coexistence of adenocarcinoma, squamous cell carcinoma and anaplastic small cell carcinoma.

Association of sarcoidosis with squamous cell carcinomas in the lung and the sarcoid reaction in malignant tumors have been discussed before in Japan[7] and by Shoenfeld *et al*,[8] who concluded that the incidence of neoplasms among patients with sarcoidosis is significantly higher ($p > 0.02$) than in the general population. Also, there is no significant correlation between the frequency of sarcoidosis and the specific types of malignancies.[9] The most common neoplasm was that of the lung (19%), the next was skin (14.5%) and the last was Hodgkin's disease and carcinoma of the breast (8% each). In our case, it seems that the tumor preceded the sarcoid because of the absence of systemic sarcoid manifestations and was limited just to the thoracic cavity.

CASE REPORT (M88)

The patient was a 77-year-old white woman who complained of cough and fever of three months duration. Radiographic studies revealed a posterior mediastinal mass that had gradually enlarged (Figs. 1 & 2). The patient had smoked two packs of cigarettes daily for the past 35 years. A needle biopsy of the mediastinal mass revealed undifferentiated large cell carcinoma, and a subsequent thoracotomy with hilar lymph node biopsy disclosed poorly differentiated carcinoma and a noncaseating granuloma in a mediastinal lymph node. A lobectomy was then performed and

Many reports register multiple primary tumors of the lung such as the coexistence of mixed anaplastic small cell and squamous cell carcinoma or malignant melanoma and small cell carcinoma. However, the coexistence of small cell, squamous-cell and adenocarcinoma is unusual. This is a case report of a 77-year-old white woman who also had sarcoidosis. All of the tumor types appeared in a single mass in the right lower lobe without evidence of distant metastasis. The authors include a review of multiple primary lung tumors.

The authors are from the University of Missouri-Kansas City where Dr. Salmassi is Assistant Professor and Associate Director of Anatomic Pathology and Dr. LaBach is Assistant Professor and Director of Anatomic Pathology, Department of Pathology. Dr. Amini is Associate Professor and Chairman of the Department of Radiology.

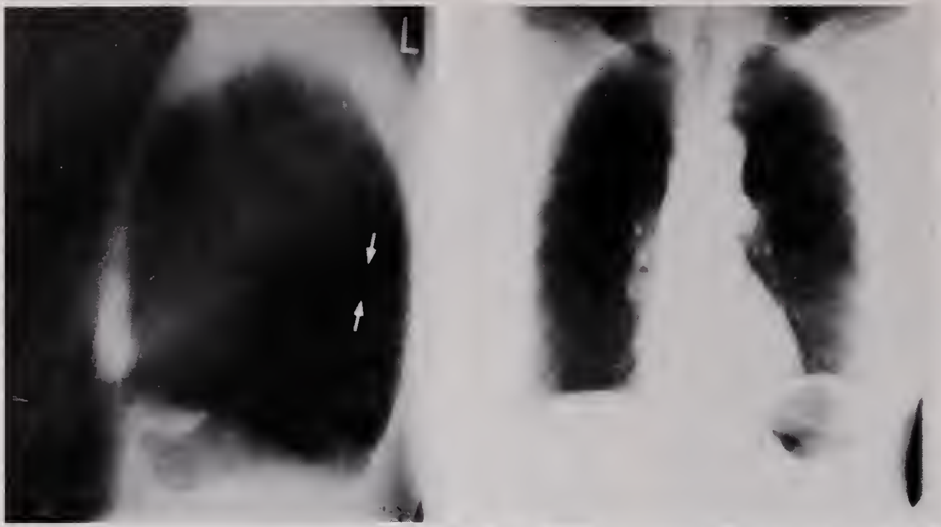

Fig. 1 Chest PA & lateral reveals pulmonary nodule projected at posterior mediastinum and clearly identified in lateral view *(arrows)*. Tumor is not well defined in PA view.

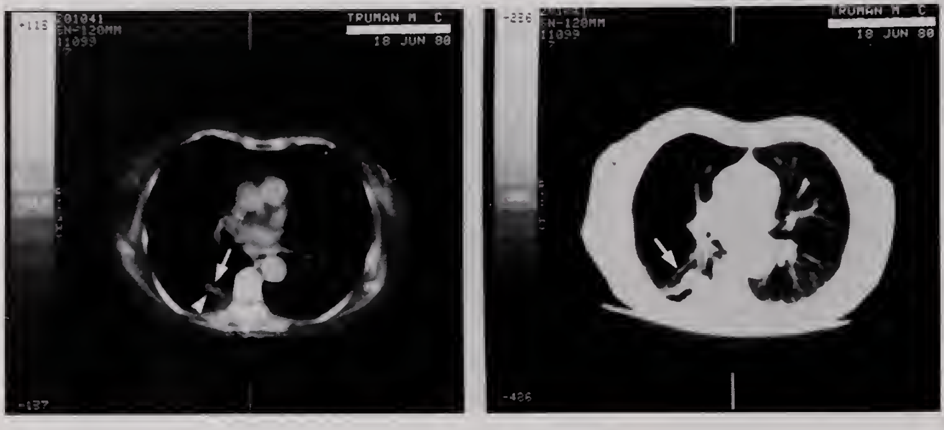

Fig. 2 CT of Chest: different window setting. Soft tissue mass lesion at right paravertebral region *(arrows)* that is connected to pleura and to the right hilum *(single arrow)*.

examination of the specimen revealed adenosquamous carcinoma with foci of undifferentiated small cell cancer and granulomas in lung and hilar lymph nodes that were consistent with sarcoidosis (Figs. 3-8). The postoperative course was stormy. Respiratory distress with fever developed, and the patient died 13 days after the operation. Autopsy permission was denied.

DISCUSSION

Most of the reports indicate that pulmonary neoplasms are more common in men than women.[5] Our case involved an elderly woman.

Tobacco consumption was studied thoroughly by many investigators, including Wynder *et al,*[10] who demonstrated an almost linear dose-response relationship between the amount smoked and the occurrence of cancer. Our patient was smoking two packs a day for more than 30 years. While the risk of developing lung cancer is directly related to the number of years of tobacco smoking, it has been shown that after 15 years of nonsmoking, the risk of developing lung cancer is almost the same as that of someone who never smoked.

Usually in patients below age 35, lung cancer is rare and improbable; above 35, it can and does occur with increasing probability with advancing years.[5] Our patient was at a high-risk age (77 years old).

Race differences in the incidence of lung cancer are steadily diminishing, probably reflecting the increase in tobacco consumption by minorities as well as their improved longevity, which makes them more liable to disease of advanced years.

The importance of a chest x-ray as part of the clinical work-up and examination of a cancer patient is well established. This matter was of great importance in our case in which actually the tumor was first suspected by routine chest x-ray and then was documented by chest C-T scan and needle biopsy.

Studies about the histogenesis of bronchial carcinoma indicate the following:[11, 12]

1. Oat-cell carcinoma, as a subclass of small cell carcinoma, is derived from the Kultschizky-type cells present in the bronchial tree and are very closely related to the bronchial carcinoid tumors.

2. Some adenocarcinomas are derived from abnormal columnar cells, but detailed examination often fails to show a definite bronchial origin. Other adenocarcinomas originate from the mucous glands situated in the walls of the bronchi.

3. Lindberg presumed that all cases exhibiting squamous metaplasia of the bronchial tree were actually instances of squamous carcinoma. It is misleading to state that squamous metaplasia is precancerous or, conversely, to assert that except in association with bronchial carcinoma, squamous metaplasia does not occur in the lung. Squamous metaplasia may be reversible and is evoked by diverse influences. Squamous elements also are differentiated *ab initio* in neoplas-

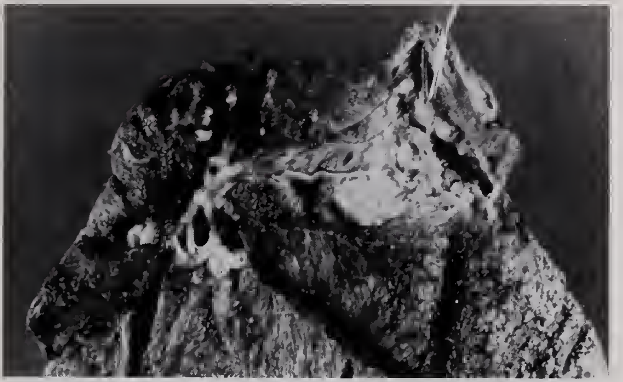

Fig. 3 Right apical bronchus is completely replaced at the peripheri by the tumor with cystic formation and fibrosis near the pleura (2x2x2 cm) and extending to the surrounding pulmonary parenchyma.

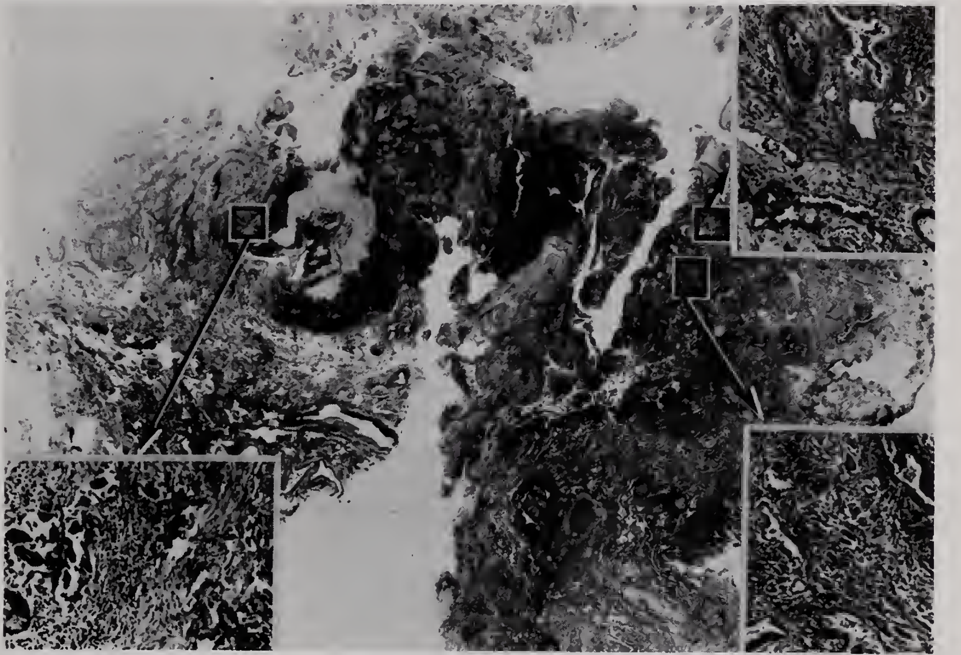

Fig. 4 Low-power photomicrograph of tumor. Insets show the combination of adenocarcinoma and squamous carcinoma *(right upper corner)*, small cell anaplastic carcinoma and squamous cell carcinoma *(left lower corner)* and multiple reactive granulomas *(right lower corner)*.

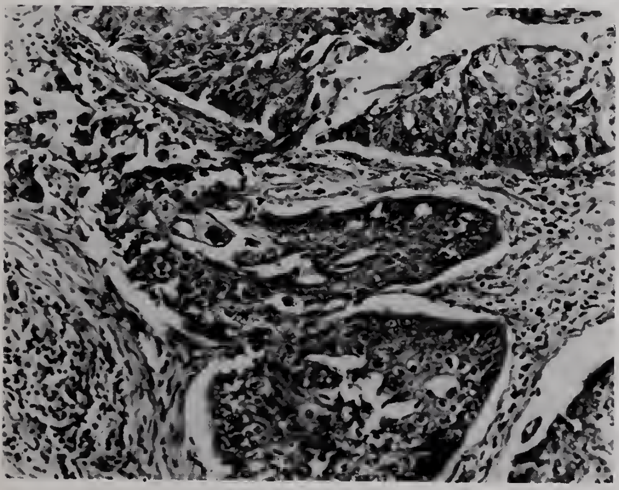

Fig. 5 Section through the tumor at portion of squamous cell carcinoma show cords and islets of malignant squamous cells with intracellular keratinization, intercellular bridges and keratin pearl formation.

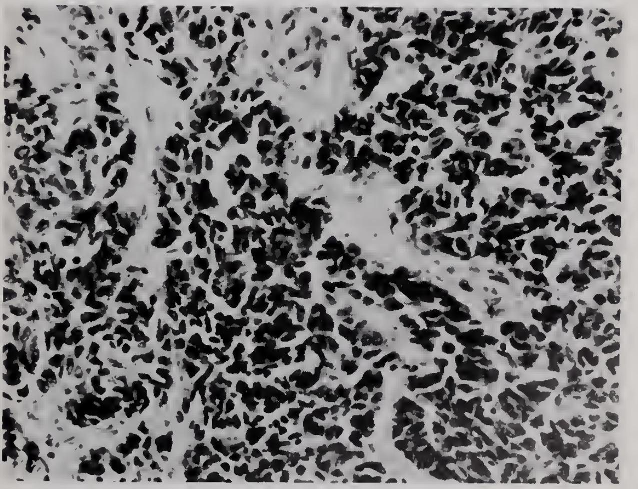

Fig. 6 Section through tumor at portion of small cell anaplastic carcinoma, shows tumor cells in a cord and diffuse pattern, with hyperchromatic oval and pleomorphic nuclei and scant cytoplasm.

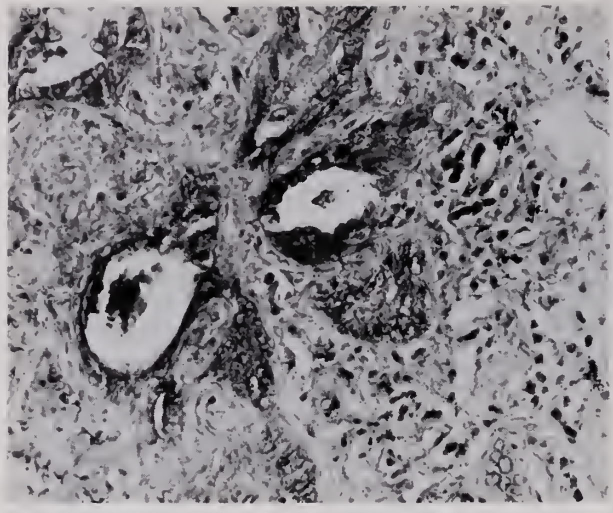

Fig. 7 Section through the tumor at adenocarcinoma portion (mucicarmine stain, positive for secretion).

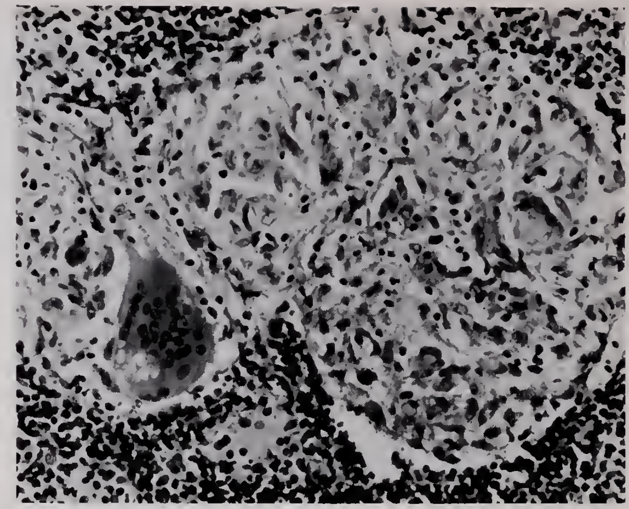

Fig. 8 Section through noncaseating granuloma in hilar lymph node shows multinucleated giant cell with an asteroid body.

ma not associated with a preexisting squamous metaplasia.

Raymond Yesner[13] reported another kind of histogenesis that is starting by small cell carcinoma and gradually differentiating to large cell carcinoma as an immediate precursor of both squamous cell carcinoma and adenocarcinoma.

We could favor the Yesner histogenesis and concur that the tumor is an unusual primary lung tumor with different cell differentiation associated with sarcoid reaction in the lung and hilar lymph nodes or could assume that the tumor is a synchronous triple primary lung tumor (collision of three different tumors) with sarcoid reaction in the lung and hilar lymph nodes, if we accept that the origin of each pattern of the present tumor cells should be of separate cell origin or of related histogenetic fate.[11, 12]

With the available evidences and criterias, we believe the probability of having a case of collision of three different tumors in the lung is less likely than having a primary lung tumor with different cell differentiation, which in both instances is not a common happening in cases of lung cancer. This case is probably one of the unique evidences in support of the histogenesis of small cell carcinoma differentiating to squamous cell carcinoma and adenocarcinoma.

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HERBERT A. WENNER, M.D., DAVID ABEL *and*
SHARON ARNOLDI, *Kansas City*

Seroimmunity to Polioviruses and *B. pertussis*

Population Data for Residents of Kansas City

IMMUNIZATION OF INFANTS AND CHILDREN with several bacterial and viral antigens has effectively reduced morbidity and mortality linked to their natural diseases. Among these are the vaccines for the attenuated polioviruses and *B. pertussis*.

Levels of population immunity to these two antigens relate in part to vaccination of the majority of susceptible individuals. As to pertussis, immunizations of a majority of patients in the recent past has not been achievable for various reasons, particularly in lower socio-economic regiments of the population. As to polioviruses, the oral vaccine has, in addition to high acceptibility, the capacity to spread among susceptible contacts.[1]

In this study, we have determined for infants, children and young adults residing in Kansas City the antibody prevalences for polioviruses and *B. pertussis* for each of four years during 1975-1980.

MATERIALS AND METHODS

Survey Population

Persons surveyed were patients with a variety of illnesses seen in the hospital or in walk-in clinics. The majority resided in low-income neighborhoods.

Sera

Excess sera obtained by venipuncture were procured for 353 persons. Of these, only one or two were not available for all poliovirus studies; 334 of these sera remained available for the *B. pertussis* studies. Sera were inactivated (56°/30′) for poliovirus neutralization tests; sera were not inactivated for pertussis agglutination tests.

ANTIBODY DETERMINATIONS

(a) *Poliomyelitis*. The neutralization test was performed by adding 0.3 ml of serial serum dilutions (1:10-1:40) to an equal volume of type-specific virus diluted to contain 100 tissue culture infective doses ($TCID_{50}$). Following incubation overnight at 4C, 0.2 ml of each serum-virus mixture was inoculated onto two roller tubes sheeted with monkey kidney cells. Cultures were read microscopically for cell virolysis; the final reading was made on the seventh day.

The antigens entered in the 1975 and 1978 studies comprised wild-type viruses, namely Type 1 (Brunhilde), Type 2 (Lansing) and Type 3 (Leon). For the 1979 and 1980 data, the tests were done with serotypic attenuated (Sabin) polioviruses.

Back titrations of diluted virus were made to determine actual $TCID_{50}$ in each test. The ranges of $TCID_{50}$s were for Type 1, 100 ± 50 (eight tests); for Type 2,128 ± 25 (8 tests); and for Type 3, 50 (four tests). Type-specific reference monkey sera were included in each test.[2]

(b) *Pertussis*. Two antigens were prepared for the agglutinin reaction. The antigen used for the 1975 and 1978 sera consisted of an isolate of *B. pertussis* grown for three days on Bordet-Gengou (Difco) medium containing 30% fresh sheep's blood.[3] Smooth colonies were raked from plates overlaid with 0.2% formal-saline. The opaque fluid suspension was washed once, concentrated by centrifugation and diluted in formal-saline to contain about 20 x 10^9 bacteria per milliliter. The antigen used in the 1979-1980 tests was provided by the Michigan State Health Department Laboratory.

Serial 2-fold dilutions of antisera (1:20-1:160) were made in normal saline; 0.3 ml of antigen was added to 0.2 ml of each serum dilution. Racked tubes were hand-shaken for three minutes and thereafter rocked on a rotary rocker for one hour

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In this study, poliovirus antibodies were found in the majority of infants and children. A lesser fraction were seropositive for *B. Pertussis*.

The authors are from The Children's Mercy Hospital and the University of Missouri-Kansas City School of Medicine.

TABLE 1
POLIOMYELITIS
AGE-RELATED ANTIBODY RATES

AGE GROUPS	FRACTIONS HAVING SERUM NEUTRALIZING ANTIBODIES IN STATED YEAR								TOTAL ALL YEARS	
	1975		1978		1979		1980			
	NO	%	NO	%	NO	%	NO	%	NO	%
<1 mo	-	-	3/9	33	10/11	91	5/8	62	18/28	64.2
1-4 mo	2/2	-	1/5	20	8/12	75	5/6	83	16/25	64.0
5-11 mo	1/1	-	8/15	53	3/8	37	3/7	43	15/31	48.4
1-4 yr	7/12	58	1/1	-	22/28	79	17/21	81	47/62	75.8
5-9 yr	6/9	67	2/2	-	7/9	78	20/32	63	35/52	67.3
10-14 yr	10/17	59	32/42	76	14/17	82	16/23	70	72/99	72.7
>15 yr	-	-	15/18	83	23/27	85	7/11	64	45/56	80.4
All Ages	26/41	63	62/92	67	87/112	78	73/108	68	248/353	70.3
TYPE 2										
<1 mo	-	-	9/9	100	9/11	82	6/8	75	24/28	85.7
1-4 mo	1/2	-	3/5	60	8/12	75	3/6	50	15/25	60.0
5-11 mo	1/1	-	14/15	93	7/8	88	5/7	72	27/31	87.1
1-4 yr	9/12	75	1/1	-	26/28	93	20/20	100	56/61	91.8
5-9 yr	5/9	56	2/2	-	6/9	67	27/31	87	40/51	78.4
10-14 yr	11/17	65	32/42	76	14/16	88	20/23	87	77/98	78.6
>15 yr	-	-	16/18	88	22/27	81	9/11	82	47/56	83.9
All Ages	27/41	66	77/92	83.7	92/111	82.9	90/106	85	286/350	81.7
TYPE 3										
<1 mo	-	-	7/9	77	8/11	73	7/8	87	22/28	78.6
1-4 mo	2/2	-	3/5	60	9/12	75	3/6	50	17/25	68.0
5-11 mo	1/1	-	13/15	87	5/8	63	3/7	37	22/31	71.0
1-4 yr	7/12	58	1/1	-	27/28	96	20/21	95	55/62	88.7
5-9 yr	6/9	67	2/2	-	7/9	78	27/32	84	42/52	80.7
10-14 yr	12/17	71	37/42	88	14/16	88	16/23	69	79/98	80.6
>15 yr	-	-	15/18	83	21/27	78	11/11	100	47/56	83.9
All Ages	28/41	68	78/92	85	91/111	82	87/108	81	284/352	80.7

at room temperature. Agglutination reactions were read by eye against an illuminated background. Reactions were graded 2+ (granular agglutination) to 4+ (flocculent agglutination). Controls included (1) reference hyperimmune human antisera with a geometric mean titer of 1:1110 ± 150 (16 tests); (2) a low titer human sera with titer of 1:37 ± 4 (15 tests), (3) negative human sera and (4) antigen suspended in saline.[4, 5]

Agglutination reactions were read independently by two readers. Positive reactions (2+ or greater) were agreed on in 95% of the tests. The difficulty with the 5% remaining was whether or not the reading was 1 or 2+.

RESULTS

Poliomyelitis

Type-specific antibody profiles appear graphically in Fig. 1. The basis for the age-specific reference points are enumerated in Table 1.

Type 1. The overall antibody-prevalence rate (*i.e.* >1:10) for all ages was 70% (Table 1). A possible rise in sero-positive responders may have occurred between 1975 and 1979; the differences are large enough to suggest increased enrollment in the vaccination program. The general distribution of antibodies by age was lowest during early infancy and was followed by rated increases during early childhood.

Type 2. The overall antibody prevalence rate was 82%. As noted above, the rates improved not only between 1975 and 1978 but, also, with increasing age after early infancy. The general pattern (Fig. 1) was for a larger percentage of seropositives than was generally obtained for Type 1 virus.

Type 3. The antibody patterns for Type 3 virus were essentially identical with those observed for Type 2 virus.

A large fraction (76%) of sera obtained from neonates (infants less than a month of age) neutralized polioviruses. Very likely, newborn acquisitions relate mainly to specific maternal antibodies. A small decrease in antibody prevalences occurred in infancy (1-11 months of age). Thereafter, there was recruitment of children up to about five years, whereafter a steady level (70%-80%) of seropositives was maintained.

Pertussis. Agglutinin titers for pertussis are summarized in Table 2 and graphically in Fig. 2. The data have been broken to show the fractions of persons having titers ≥1:20 and ≥1:80 in order to group those with either low or moderate agglutinin titers (see discussion).

Overall, the serologic results indicate that 56%

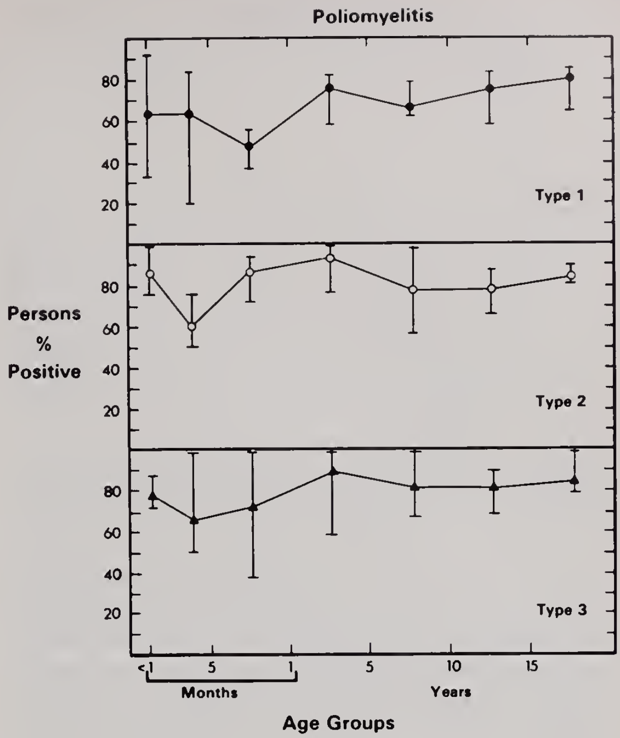

Fig. 1 Percent of persons, each age group, possessing serum antibodies neutralizing polioviruses, Types 1, 2 and 3.

TABLE 2
PERTUSSIS
AGE-RELATED AGGLUTININ TITERS

Age Groups	PERCENTILES HAVING AGGLUTININS ≥1:20								Totals All Years	
	1975		1978		1979		1980			
	NO	%	NO	%	NO	%	NO	%	NO	%
<1 mo	-	-	11/17	64.7	4/7	57.1	2/7	28.6	17/31	54.8
1-4 mo	0/2	-	4/6	66.6	4/13	30.8	0/6	-	8/27	29.6
5-11 mo	0/2	-	6/19	31.6	5/9	55.6	1/6	16.7	12/36	33.3
1-4 yr	5/11	45.4	2/2	-	14/31	45.2	5/10	50	26/54	48.1
5-9 yr	5/9	55.6	1/3	33.4	4/11	36.4	16/24	66.7	26/47	55.3
10-14 yr	8/12	66.7	20/29	69.0	4/20	20.0	2/17	11.8	34/78	43.6
>15 yr	-	-	15/21	71.4	8/26	30.1	2/14	14.3	25/61	41.0
All Ages	18/36	50.0	59/97	60.8	43/117	36.8	28/84	33.3	148/334	44.3

(b) AGGLUTININS ≥1:80

<1 mo	-	-	8/17	47.0	1/7	14.3	1/7	14.3	10/31	32.2
1-4 mo	0/2	-	2/6	33.3	0/13	-	0/6	-	2/27	7.4
5-11 mo	0/2	-	6/19	31.6	0/9	-	0/6	-	6/36	16.7
1-4 yr	3/11	27.3	1/2	50.0	1/31	3.2	0/10	-	5/54	9.3
5-9 yr	3/9	33.3	1/3	33.3	1/11	9.1	6/24	25.0	11/47	23.4
10-14 yr	4/12	33.3	11/29	37.9	1/20	5.0	0/17	-	16/78	20.5
>15 yr	-	-	5/21	23.8	5/26	19.2	0/14	-	10/61	16.4
All Ages	10/36	27.8	34/97	35.1	9/117	7.7	7/84	8.3	60/334	18.0

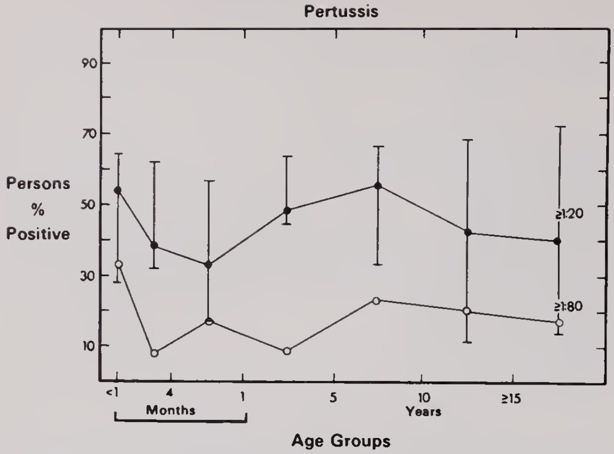

Fig. 2 Percent of persons, each age group, possessing agglutinins for *B. pertussis.*

of the survey population had either no agglutinins or low levels thereof. About half of the neonates' sera agglutinated *B. pertussis;* presumably these antibodies were acquired from their mothers.[6-8] A fall-off of positive reactors during early infancy was followed by a modest rise during childhood, and thereafter a decline in prepubertal and postpubertal subjects.

The fraction of persons yielding agglutinin titers of 1 : 80 or more averaged 18% (overall ranges for the indicated years = 8% to 35%). The age-specific rates at reduced levels followed the overall patterns noted above.

Discussion

Our study provides for polioviruses an acceptable ratio of antibody-carrying (immune) persons in the population surveyed. With the exception of neonates, antibodies were undoubtedly raised following administration of attenuated polioviruses. The number of persons inadvertently infected from contact exposure to vaccines is unknown. Our data moreover fail to include persons carrying levels of antibody of ≤1 : 10 serum dilution. It is likely that within the population there were persons with low levels of antibody (~1 : 4) and by their addition, the prevalence rates would exceed those obtained.

Our antibody data for *B. pertussis* are not easily understood. About half or fewer of the population sampled had measurable agglutinins of pertussis. Moreover, the fractions with agglutinins ≥1 : 80 ranged between 8% and 35% (mean, 18%). Thirty-one sera (9%) had titer value ≥ : 160.

Earlier studies[9, 10] point up the fact that serum agglutinin titers of ≥1 : 320 protects and titers of ≤1 : 160 partially protect children from developing clinical pertussis. Attack rates were reported to vary inversely with serum agglutinin titers. Moreover, once raised agglutinins have been noted to remain unchanged for six or more years.[10]

Our data conflict with these earlier reports both with respect to high levels and persistance of agglutinins. If the large fraction of sero-negative and the slightly lesser fraction with low levels of agglutinins indicates susceptibility, our community barrier to outbreaks of pertussis is in jeopardy. However this may not be since protection to clinical pertussis appears to be provided by low concentrations of agglutinins.[11, 12]

A major unanswered question relates to the risks of acquiring pertussis in the sero-negative population. Were these persons not immunized? Was the vaccine antigenically impotent? Since we do not have available the vaccination histories of our study population, it is not possible to relate the data to postvaccinial antibody responses or of vaccine potencies or of agglutinins raised and lost.

Summary

The serologic data obtained for poliomyelitis reveal that between 70% and 80% of the survey population had acquired neutralizing antibody, indicating a substantial community barrier to focal outbreaks of disease. Had lower serum (*i.e.* 1 : 4) dilutions been tested, it is probable that these rates might approach the 90% level.

Fifty-six percent of the survey population were sero-positive (agglutinin titers ≥1 : 20) for *B. pertussis*. The large sero-negative fraction, particularly among infants and young children may represent a significant reservoir of presumed susceptibles.

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(Continued on page 89)

STEPHEN HAMBURGER, M.D., *Kansas City*
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Hypophosphatemia

ALTHOUGH IT IS KNOWN that phophorus has a critical role in the synthesis and function of many body tissues, the prevalence and clinical correlations of pronounced hypophosphatemia (≤1 mg/dl) have only been recognized recently. Moderate hypophosphatemia (1.0 mg/dl to 2.5 mg/dl) is casually associated with many conditions; however, causes of pronounced depletion of phosphorus are more restricted (Table 1).[1] This article presents a review of the pathophysiology, clinical consequences and treatment of pronounced hypophosphatemia.

PATHOPHYSIOLOGY

The normal dietary intake of phosphorus is approximately 1 gm daily. The kidneys are the major route of excretion with 85% to 90% of a phosphorous load passing in the urine and the remaining 10% to 15% being excreted in the feces.[2] Phosphate depletion has many causes including decreased intestinal absorption, increased intestinal loss, exaggerated renal loss and intracellular shift of phosphate (Table 2). These mechanisms often overlap, a good example being diabetic ketoacidosis.

Most patients will have anorexia, nausea and vomiting or diarrhea so that part of the phosphorous depletion will be secondary to decreased intake and increased gastrointestinal loss. Antacid ingestion, particularly alumnium and calcium-containing antacids, will notably accentuate the gastrointestinal loss. Renal wasting is common in diabetic ketoacidosis. Both glycosuria and ketonuria have been associated with renal phosphate wasting. In addition, acidosis decomposes intracellular organic compounds so that inorganic phosphate moves outside of cells and is excreted in the urine.

Lastly, hypomagnesemia another common abnormality in diabetic ketoacidosis that may produce excessive renal phosphate wasting. Although there is a loss of total body phosphorus, only a small proportion of patients will be hypophosphatemic at the time of diagnosis. Hypophosphatemia is prevented because of the acidemic state causing phosphorus to move extracellular, catabolism of body tissue and decreased renal perfusion.

With treatment, the urinary excretion of phosphorus increases and the serum phosphate level falls in the first few hours.[3] This drop is secondary to the insulin-induced intracellular shift of phosphorus, increased renal excretion and correction of the acidemic state. In addition, respiratory alkalosis, another common acid-base abnormality in diabetic ketoacidosis, produces an intracellular shift of phosphorus. It is important to realize that hypophosphatemia may not necessarily be equated with total body phosphorous depletion. Hyperalimentation and the nutritional recovery syndrome are two such examples.

PRESENTATION

Clinical manifestations of phosphorous depletion are protean and may involve several organ systems (Table 3).

TABLE 1
CAUSES OF PRONOUNCED HYPOPHOSPHATEMIA

1. Diabetic ketoacidosis*
2. Alcoholic withdrawal†
3. Antacid ingestion (PO_4 binding)
4. Recovery phase after severe burns
5. Respiratory alkalosis
6. Hyperalimentation‡

* Usually within first day of therapy.
† Usually one to three days after withdrawal.
‡ Less common with present hyperalimentation solutions.

TABLE 2
PATHOPHYSIOLOGICAL CAUSES OF HYPOPHOSPHATEMIA

A. *Intracellular shift of phosphate*
    1. Respiratory alkalosis
    2. Carbohydrate loading
B. *Renal phosphate loss*
    1. Renal tubular defects
    2. Diuretics
    3. Hypomagnesemia
    4. Hyperparathyroidism
C. *Decreased internal absorption of phosphate*
    1. Malabsorption
    2. Phosphate binding antacids
D. *Increased intestinal loss of phosphate*
    1. Diarrhea
E. *Multiple causes*
    1. Diabetic ketoacidosis
    2. Alcohol withdrawal

TABLE 3
CLINICAL MANIFESTATIONS OF PHOSPHOROUS DEPLETION

A. *Cardiovascular*
  1. Congestive heart failure
B. *Hematologic*
  1. Hemolysis
  2. Decreased tissue oxygenation
  3. ? Increased risk of infection
  4. ? Increased bleeding tendency
C. *Central nervous system*
  1. Obtundation
  2. Paresthesias
  3. Seizures
  4. Delirium
D. *Endocrine/Metabolic System*
  1. Impaired glucose utilization
  2. Insulin resistance
  3. Metabolic acidosis
E. *Pulmonary system*
  1. Chest wall weakness
  2. Acute respiratory failure
F. *Musculoskeletal System*
  1. Joint stiffness
  2. Pseudofractures
  3. Weakness
  4. Rhabdomyolysis

(a) *Cardiovascular System*

Marked hypophosphatemia may have a deleterious effect on myocardial function. O'Connor and associates have shown that pronounced phosphorous depletion may cause a depression in cardiac output and stroke work and that both are markedly improved by intravenous phosphate therapy.[4] In addition, Darsee and Nutter found that in three patients with congestive heart failure associated with profound hypophosphatemia, phosphorous supplementation was beneficial.[5] Thus, it seems likely that marked hypophosphatemia may produce a reversible disorder of cardiac function. Although no mechanism is known, it is postulated that phosphorous depletion decreases intracellular stores of adenosine triphosphate (ATP).

(b) *Hematologic System*

Marked phosphorous depletion impairs tissue oxygenation through its interaction on hemoglobin oxygen release and the oxyhemoglobin dissociation curve (Fig. 1). Pronounced phosphorous depletion is associated with low red blood cell concentration of 2,3-diphosphoglycerate (2,3-DPG). Decreased levels of 2,3-DPG shifts the oxyhemoglobin dissociation curve and the P_{50} (the arterial oxygen concentration at which 50% of the hemoglobin is saturated) to the left, thus inhibiting oxygen unloading at the tissue level. Thus, the putative depressed myocardial function and the low P_{50} cause tissue oxygenation to possibly be severely impaired in the markedly hypophosphatemic patient. Early use of phosphate salts has been shown to replete 2,3-DPG levels rapidly and restore the P_{50} toward normal, particularly in diabetic ketoacidosis.[6] Pronounced hypophosphatemia may also be associated with hemolysis.

Neutrophil function is particularly effected by pronounced hypophosphatemia. Chemotaxis, phagocytosis and killing of intracellular bacteria are altered in this state.[7-9] Although it is not known whether these abnormalities have clinical relevance in regard to infectious complications, phosphorous supplementation will largely reverse the deficiencies. Clinical observations suggest that there may be a correlation between hypophosphatemia and septic states.[10]

Lastly, platelet function is impaired in marked hypophosphatemia. Yawata and associates, studying hyperalimented dogs, found a rapid rate of platelet disappearance, thrombocytopenia, impairment of clot retraction and an increased bleeding tendency in the presence of pronounced phosphorous depletion.[11] In addition, Mommaerts has shown that hypophosphatemic patients have an increased bleeding tendency.[12] As

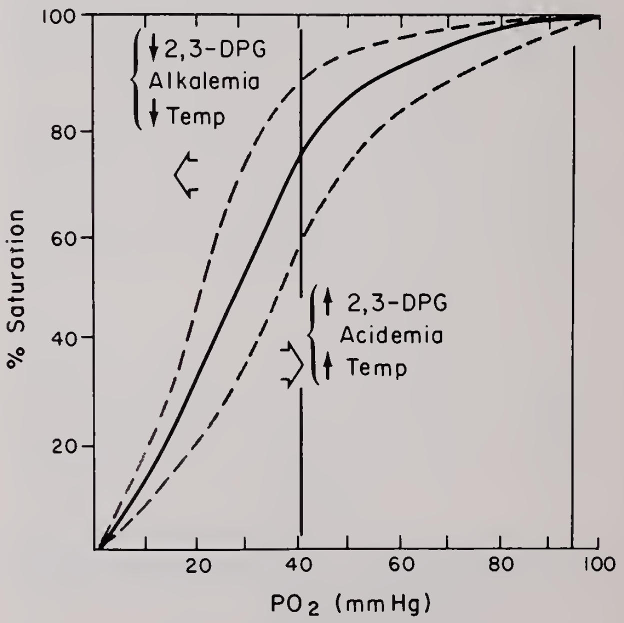

Fig. 1 Oxyhemoglobin dissociation curve and factors which affect it. Decreased 2,3-DPG concentration, alkalemia and a decreased temperature will shift the curve to the left, resulting in an increased affinity of hemoglobin for oxygen with possible tissue hypoxia. Increased 2,3-DPG, acidemia and an increased temperature will produce an opposite effect.

with other hematologic dysfunctions, the abnormalities are preventable or reversible with phosphate therapy.

(c) *Central Nervous System*

Pronounced phosphorous depletion alters central nervous system functions. Silvis and colleagues found that hypophosphatemic patients secondary to hyperalimentation frequently developed paresthesias and mental obtundation.[13] Seizures have also been observed. Prevention of phosphorous depletion will alleviate these abnormalities.

(d) Endocrine/Metabolic System

Glucose utilization in erythrocytes has been shown to be impaired in hypophosphatemic hyperalimented patients.[6] In addition, a recent animal study indicates that phosphorous deficiency may produce an insulin resistant state.[14] Lastly, it is now clear that a severe metabolic acidosis may accompany pronounced hypophosphatemia.[2]

(e) *Pulmonary System*

Boelens and Furlan in separate reports described weakness of the chest muscle in hypophosphatemic patients.[15, 16] In addition, Newman and associates reported two patients with chronic obstructive pulmonary disease who developed acute respiratory failure while hypophosphatemic.[17] Both patients responded rapidly to intravenous phosphorous therapy. Unfortunately, both of Newman's patients were simultaneously hypokalemic and, thus, the relationship of the respiratory failure with the hypophosphatemia is clouded.

Although it is known that phosphorus has a critical role in the synthesis and function of many body tissues, the prevalence and clinical correlation of pronounced hypophosphatemia (≤1 mg/dl) have been recognized only recently. Moderate hypophosphatemia (1.0 mg/dl to 2.5 mg/dl) is causally associated with many conditions. However, causes of pronounced depletion of phosphorus are more restricted. The author reviews the pathophysiology, clinical consequences and treatment of pronounced hypophosphatemia.

Dr. Hamburger is Associate Professor of Medicine and Dr. Rush is Associate Professor of Medicine and Pharmacy, University of Missouri-Kansas City School of Medicine.

TABLE 4
TREATMENT OF PRONOUNCED HYPOPHOSPHATEMIA
(≤1 mg/dl)

Method 1
- a. 0.08 mmol/kg body weight (2.5 mg/kg body weight) if the hypophosphatemia is recent and uncomplicated.
- b. 0.16 mmol/kg body weight (5 mg/kg body weight) if it is prolonged and has multiple causes
- c. Increase initial dose by 25% if patient is symptomatic; decrease dose if patient is hypercalcemic
- d. Give each dose over a period of 6 hours and monitor clinical status and serum phosphorous levels. Maintain serum phosphorous level at 1.5 mg/dl or higher

Method 2
- a. Give 20 mmoles phosphorus each 8 hours
- b. Monitor clinical status and serum phosphorous levels. Maintain serum phosphorous level at 1.5 mg/dl or higher.

(f) *Musculoskeletal System*

Prolonged hypophosphatemia has been associated with oseomalacia and pseudofractures.[18] In addition, Moser and Fessel have described four hypophosphatemic patients with symptoms resembling ankylosing spondylitis who responded to phosphorous repletion.[19] Lastly, hypophosphatemia has been associated with rhabdomyolysis and elevated serum creatinine phosphokinase (CPK) levels.[20] Thus, hypophosphatemia should be included in the differential diagnosis of an elevated CPK. The CPK concentration usually reaches its peak at the nadir of the phosphorous level.

TREATMENT (TABLE 4)

Therapeutic guidelines for phosphorous administration in the treatment of pronounced hypophosphatemia are few and mainly empiric. Although oral phosphate preparations are available, parenteral administration is recommended for severe phosphorous depletion. As a rough guideline, Lentz and associates suggest an initial dose of 0.08 mmol/kg body weight (2.5 mg/kg body weight) if hypophosphatemia is recent and uncomplicated and 0.16 mmol/kg body weight (5 mg/kg body weight) if it is prolonged and has multiple causes.[21] Initial doses should be approximately 25% higher if the patient is symptomatic and lower if the patient is hypercalcemic. Each dose should be given intravenously over a period of six hours, and serum phosphorous levels

TABLE 5
PARENTERAL PHOSPHOROUS PREPARATIONS

Name	*pH*	*Phosphate mmol/ml*	*Phosphorous mg/ml*	*Sodium meq/ml*	*Potassium meq/ml*
Neutral Na phosphate	7.35	0.09	2.80	0.16	0.00
Neutral Na, K phosphate	7.40	0.10	3.10	0.16	0.02
Na phosphate	5.70	3.00	93.00	4.00	0.00
K phosphate	6.60	3.00	93.11	0.00	4.36

Adapted from Lentz *et al.*[21]

should be closely monitored.

Another method of administration, suggested by Knochel, is to give 20 mmoles of sodium phosphate each eight hours.[2] In his experience, this dosage usually keeps the serum phosphorous level at 1.5 mg/dl or higher and is low enough not to cause metastatic calcification. Several parenteral phosphorous preparations are available (Table 5).

Phosphorus administration is not without hazards, but most complications may be prevented with frequent biochemical and clinical monitoring (Table 6). Pronounced hypotension and acute renal failure may occur when intravenous phosphorus is administered in doses of 50 mmol (1550 mg) or more in less than three hours.[22] Signs and symptoms of sodium overload or hyperkalemia may occur depending on which phosphate salt is used. In addition, symptomatic hypocalcemia and hypomagnesemia have been well documented during phosphate therapy.

Winter and colleagues have described a patient with severe diabetic ketoacidosis in whom potassium supplementation, given as the phosphate salt, produced marked hypomagnesemia, hypocalcemia and hyperphosphatemia.[23] In addition, parathormone levels were inappropriately low. Several patients with similar results were reported by Zipf and associates.[24] Metastatic calcification may also occur. To prevent this complication, the calcium and phosphorous product (in mg/dl) should not exceed approximately 60 mg/dl. Patients with hyperphosphatemia and/or renal insufficiency should not receive phosphorous supplementation. In addition, phosphate therapy should be given very cautiously, if at all, to hypercalcemic patients.

TABLE 6
RISKS OF PHOSPHOROUS THERAPY

Hyperkalemia
Sodium overload
Metastatic calcification
Hypocalcemia/hypomagnesemia
Renal failure
Hypotension

Summary

Pronounced hypophosphatemia (≤1 mg/dl) is associated with a wide variety of illnesses and may occur with a constellation of signs and symptoms. Phosphorous supplementation has been shown to alleviate many of these abnormalities. In regard to morbidity and mortality, the clinical benefit of phosphorous administration in many conditions is still largely unknown. Few studies have carefully accessed the value of phosphate administration in alcohol withdrawal and diabetic ketoacidosis, two major causes of marked hypophosphatemia. In the latter condition, results of studies are conflicting as to the value of phosphate therapy.[25, 26]

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In Memoriam

Richard G. Helman, M.D., Indiana Creek Nursing Center, 12000 Wornall Rd., Room 702, Kansas City 64145; graduate of the University of Kansas, 1923; member of Jackson County Medical Society; aged 82; died Dec. 11, 1981.

David M. Freeman, M.D., 7316 Kingsbury Blvd., St. Louis 63130; graduate of Washington University, 1943; member of St. Louis Metropolitan Medical Society; aged 63; died Dec. 16, 1981.

Monroe Little, M.D., 7830 Blackberry Ave., St. Louis 63130; graduate of Meharry Medical College, 1937; member of St. Louis Metropolitan Medical Society; aged 79; died Dec. 18, 1981.

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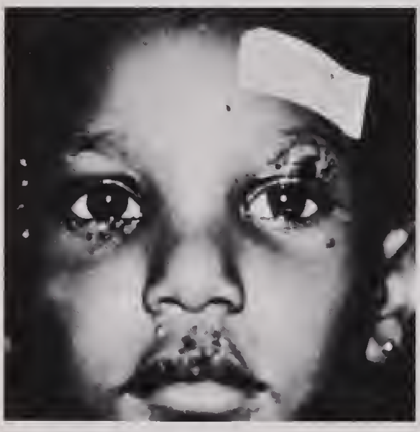
John Ryan, M.D., 28 Ridgetop, St. Louis 63117; graduate of St. Louis University, 1929; member of St. Louis Metropolitan Medical Society; aged 76; died Dec. 26, 1981.

William E. Allen, Jr., M.D., 4951 Maffitt, St. Louis 63113; graduate of Howard University, 1930; member of St. Louis Metropolitan Medical Society; aged 78; died Dec. 31, 1981.

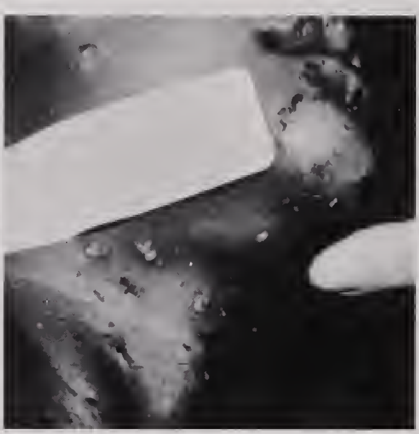
DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo–

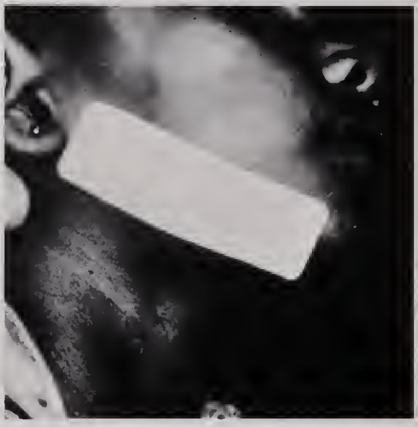
- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. *No* treatment failures occurred with Tegopen.

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*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular. (12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® *(cloxacillin sodium)*	Given *penicillin V-K*
Staphylococcus aureus	(78 patients)	39	39
Returned to clinic at one week		29†	38†
Treatment failure at one week		0	18 (47.4%)
Staphylococcus aureus* and *Streptococcus pyogenes	(9 patients)	4	5
Returned to clinic at one week		4	5
Treatment failure at one week		0	2 (40%)
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic *Streptococcus*	(1 patient)	0	1
TOTALS:	**102 patients**	**52 patients**	**50 patients**

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus,* 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes,* and 1% beta-hemolytic *Streptococcus*.‡
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.
- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

‡The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

TEGOPEN®
(cloxacillin sodium)
–effective therapy for staph infections of the skin and skin structures

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WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100. 500 mg. in bottles of 100.
Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

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The Goetze Niemer Company requests
the pleasure of your company
for its Annual Open House
and Equipment Show
Friday, March 26, 5–10 p.m.
Saturday, March 27, 10 a.m.–10 p.m.
Crystal Room – Glenwood Manor
9100 Metcalf, Overland Park, Kansas
Hospitality Hour 5 p.m.

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(913) 381-4222

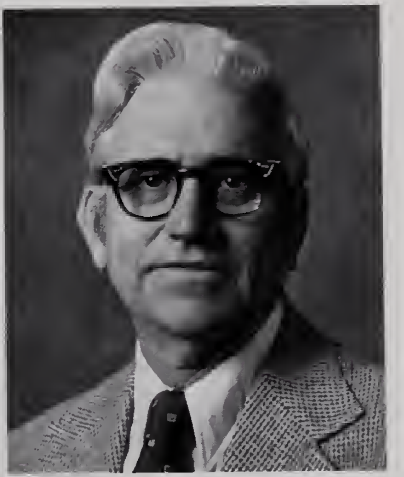
President's Message

You Are Needed as a Key Contact Person

Several years ago, the Missouri State Medical Association established a program designed to insure that every Missouri legislator will be contacted personally by a physician in regard to important issues and legislative bills that pertain to health care. This goal is based upon the natural assumption that every legislator has a contact at home with his own personal physician or one who provides health care for his family. Our problems have been either (1) not reaching the physicians of many legislators or (2) their physicians not being willing to make this legislative contact on the local personal basis.

Becoming a key contact person requires only that you notify the MSMA of your willingness to cooperate in this effort. You will then be informed by the staff of pending legislation and the MSMA's positions on that legislation.

To further boost the program, the MSMA has designed a special informational legislative tape report which is available to all physicians merely by calling 314-636-4844. This report will be updated every Thursday and will be available all week during the legislative session.



Eugene T. Hansbrough, M.D.

It appears that too many of us have assumed that "someone else" is making the key contacts. Thus, we are not being successful. We need every reader of this column and your colleagues (who may or may not read this journal) to know that the entire legislative program is important and we must succeed. You also should advise the legislative staff at the MSMA of the information you give your legislator so they will be better prepared when they approach that particular legislator.

Please note that Dr. Andrew McCanse of Kansas City, a past-president of the MSMA, has entered the national arena by filing for the race for U.S. Representative. He needs your support. Congress becomes an immediate source of information for all legislators and the medical field's influence can be tremendous. Having served as Councilor and President of our Association, Dr. McCanse is in an excellent position to be aware of legislative procedure and he will yield important influence in the U.S. Congress **if we will elect him.**

Please join the Key Contact program today by contacting the MSMA . . . dial 314-636-5151. You can bet that other people who are introducing bills we oppose in general have contact with their legislators. Let's do everything we can for the future of our physicians and our patients.

MSMA Auxiliary

CONVENTION TIME!

The 57th Annual Convention of the Missouri State Medical Association Auxiliary will be held on April 1-3 at the Hyatt Regency Hotel in Kansas City. The convention chairmen, Mrs. William Goodson, Jr. and Mrs. Donald Sanders of Kansas City, are planning an exciting convention program complete with a style-show luncheon.

The Fourth Annual MSMF/AMA-ERF Benefit Auction will be held at 6:30 PM on Thursday, April 1 in the Regency Atlanta Room. Since this evening will benefit our future physicians, we urge everyone to attend and lend support to this worthy project in this entertaining and fun way.

Mrs. Sam Gaston of Joplin, incoming Auxiliary president, will be honored by the Jasper County Auxiliary at a reception from 5:30 to 7 PM in the Empire B. Room on Friday, April 2. Everyone is invited to attend. Mrs. Gaston will be installed at the Auxiliary's Installation Luncheon at noon on Saturday.

Mrs. Jerry Meyer
President

The Auxiliary's Public Affairs Breakfast will begin at 7:30 AM on Saturday, April 3 in the Regency Chicago Room. The speaker will be the Honorable Ike Skelton, U.S. Representative from the Missouri Fourth District. If you are interested in AMPAC and MMPAC, this is an excellent time to gain information about current legislative topics and concerns.

Please plan to attend as many of these activities as your schedule will allow. You are always welcome.

For your patients' benefit...

BEFORE YOU WRITE
YOUR NEXT ANTIARTHRITIC
PRESCRIPTION,
PLEASE READ
THIS MESSAGE

Boots announces a pharmaceutical first.

TWO WAYS YOUR WILL SAVE MONEY WITH

Introducing

RUFEN® (ibuprofen)

$1.50 REBATE DIRECT TO YOUR PATIENTS ON EVERY PRESCRIPTION OF 100. REFILLS INCLUDED.

One dollar fifty cents returned for every Rebate Coupon your patients mail in.

Every bottle of 100 tablets of RUFEN 400 mg has a Rebate Coupon attached, with full instructions for redemption.

It has already been determined, through public opinion research, that most arthritic patients will appreciate direct rebate savings as much as they appreciate the results of ibuprofen therapy.

AND RUFEN IS PRICED LOWER TO BEGIN WITH.

Boots has already priced RUFEN lower to the wholesaler and the retailer. And if these savings are passed along, as they should be, your patient will receive the benefit of this lower price. Add these savings to the rebate, and your patients receive substantial relief from the costs of a medication many of them may take for years.

RUFEN IS NOT A GENERIC. BOOTS IBUPROFEN IS THE ORIGINAL.

And if you wish, RUFEN may be substituted for Motrin®, because it is bioequivalent.*

Original research by The Boots Company Ltd., of Nottingham, England, developed ibuprofen.

And though we introduced it ourselves elsewhere around the world, we licensed ibuprofen for sale in the United States.

Motrin® (ibuprofen) is a registered trademark of The Upjohn Company.

ARTHRITIC PATIENTS IBUPROFEN THERAPY.

You first came to know it as Motrin (ibuprofen), manufactured by Upjohn.

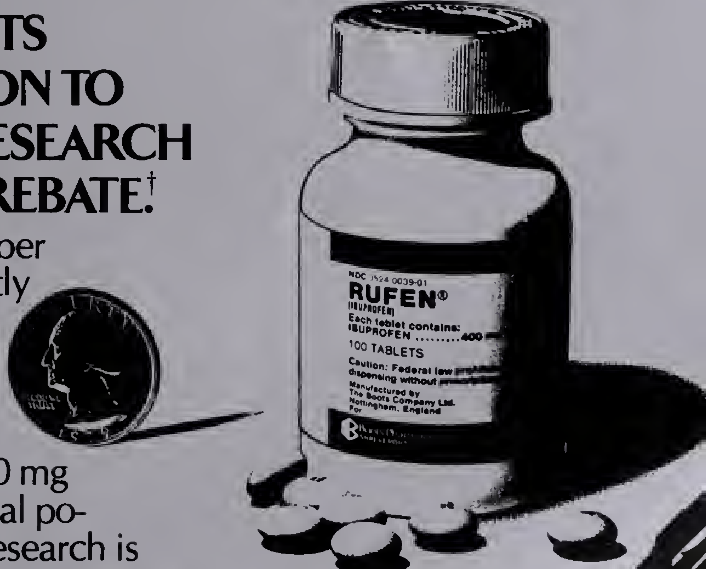
Now, as we have established facilities in America, we hope you'll come to know Boots brand name for ibuprofen as RUFEN.

BIOEQUIVALENCY? OF COURSE.*

That's why you may substitute RUFEN for Motrin.

ALSO: A BOOTS CONTRIBUTION TO ARTHRITIS RESEARCH WITH EVERY REBATE.†

A 25¢ contribution per rebate is built directly into the RUFEN program. And with thousands of prescriptions anticipated for RUFEN 400 mg each year, the annual potential for arthritis research is enormous.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Each tablet contains:
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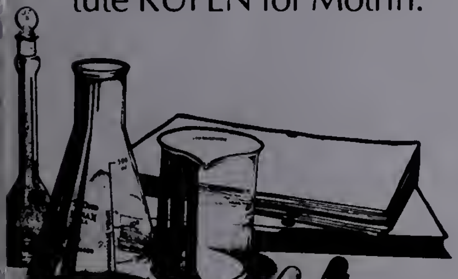

Rufen®
(ibuprofen)

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*Data on file.

†Contributions made to: International League Against Rheumatism.

WHEN YOU'RE WRITING YOUR NEXT PRESCRIPTION FOR IBUPROFEN, PLEASE REMEMBER:

RUFEN® OFFERS A $1.50 REBATE DIRECT TO YOUR PATIENTS ON EVERY BOTTLE OF 100 TABLETS OF RUFEN 400 MG.

RUFEN COSTS YOUR PATIENTS LESS TO BEGIN WITH.

RUFEN CONTRIBUTES 25¢ PER REBATE TO ARTHRITIS RESEARCH.

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RUFEN (IBUPROFEN) IS BIOEQUIVALENT TO MOTRIN® (IBUPROFEN).*

I hope we've given you several good reasons to remember RUFEN the next time you prescribe ibuprofen.

If we haven't, or if you'd like to know more about Boots Pharmaceuticals or this program, please don't hesitate to drop me a line. Or call us directly at our toll-free number: (800) 551-8119. Louisiana residents, call (800) 282-8671.

To ensure that your patients receive the benefits of the Rufen program, *be sure to specify* "D.A.W.," "No Sub," or "Medically Necessary," as required by the laws of your state.

Sincerely,

John D. Bryer, President
Boots Pharmaceuticals, Inc.

Boots Pharmaceuticals, Inc.
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Pioneers in medicine for the family

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5/81

RF-009

RUFEN®
(ibuprofen/Boots)

(For full prescribing information, see package brochure.)

RUFEN® Tablets
(ibuprofen)

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally; however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS

Incidence greater than 1%

Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4% to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). **Central Nervous System:** dizziness*, headache, nervousness. **Dermatologic:** rash* (including maculopapular type), pruritus. **Special Senses:** tinnitus. **Metabolic:** decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** depression, insomnia. **Dermatologic:** vesiculobullous eruptions, urticaria, erythema multiforme. **Special Senses:** amblyopia (see PRECAUTIONS). **Hematologic:** leukopenia, decreased hemoglobin and hematocrit. **Cardiovascular:** congestive heart failure in patients with marginal cardiac function, elevated blood pressure.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** paresthesias, hallucinations, dream abnormalities. **Dermatologic:** alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** hemolytic anemia, thrombocytopenia, granulocytopenia bleeding episodes. **Allergic:** fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** gynecomastia, hypoglycemia. **Cardiovascular:** arrhythmias (Sinus tachycardia, bradycardia, and palpitations). **Renal:** decreased creatinine clearance, polyuria, azotemia.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain. Do not exceed 2,400 mg per day.

CAUTION: Federal law prohibits dispensing without prescription.

Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

Preliminary Program

MISSOURI STATE MEDICAL ASSOCIATION

124th Annual Session

Hyatt Regency Hotel, Kansas City **April 1-4, 1982**

THURSDAY, APRIL 1

8:00 AM Registration of Delegates.
10:30 AM **HOUSE OF DELEGATES, OPENING SESSION.**
12:00 NOON Jackson County Medical Society Luncheon.
12:00 NOON St. Louis Metropolitan Medical Society Luncheon.
1:00 PM Reference Committee Meetings.
5:30-
6:30 PM Reception honoring MSMA President-Elect.
6:30 PM Missouri State Surgical Society Board of Directors. Cocktails and Dinner.
6:30 PM MSMA Auxiliary Auction.

FRIDAY, APRIL 2

7:00 AM Councilor District Breakfasts.
7:15-
11:00 AM Complimentary Coffee and Rolls.
8:00 AM Registration.
8:30 AM Missouri University Board of Directors. Breakfast and Meeting.
9:00-
10:30 AM GENERAL SESSION.
Introductions: E. T. Hansbrough, M.D., Poplar Bluff, MSMA President
Speaker:
"The Historical Background of Where American Medicine Is Today – and How It Got There." Wilfred E. Wooldridge, M.D., Springfield, Editor, MISSOURI MEDICINE.
10:30 AM MOMEDICO Stockholders and Board of Directors Meeting.
10:30 AM Intermission to view exhibits.
11:00 AM-
12:30 PM *"Cystic Fibrosis — An Adult Disease"* (Annual Charles A. Brasher, M.D. Lectureship).
Speaker: Giulio J. Barbero, M.D., Chairman, Department of Child Health, University of Missouri-Columbia.
Sponsored by the Missouri Thoracic Society.
11:00 AM-
12:30 PM *"Morbid Obesity."*
Sponsored by the Missouri State Surgical Society.
11:00 AM-
12:30 PM *Scientific Session.*
Speakers: Philip Wright, M.D., Campbell Clinic, Memphis, Tenn. Topic to be Announced.
"Advances in Spinal Surgery." Robert Gaines, M.D., Assistant Professor of Surgery, University of Missouri-Columbia.
Sponsored by the Missouri Orthopaedic Association.
11:00 AM-
12:30 PM *"The Right Hand-Left Hand Rule: A Guide to Interpretation of Health Care Macroeconomics."*
Speaker: John K. Layle, M.D., Clinical Associate Professor of Medicine, University of Missouri-Kansas City.
Moderator: John K. Layle, M.D., Kansas City.
Sponsored by the Missouri Society of Internal Medicine.
12 NOON Jackson County Medical Society Luncheon.
12:30 PM Missouri University Medical Alumni Luncheon.
12:30 PM Missouri Thoracic Society Luncheon.
1:00-
5:00 PM *"Symptom of Depression and Antidepressant Medication."*
Speaker: Samuel Gershon, M.D., Chairman, Department of Psychiatry, Wayne State University, Detroit, Michigan.
Moderator: Robert Nash, M.D., Shawnee Mission, Kan.
Sponsored by the Missouri Psychiatric Association.

1:00-
4:00 PM *Scientific Session*. Sponsored by the Missouri Chapter, American College of Emergency Physicians.
Organizational Meeting of Emergency Physicians to follow Scientific Session.

2:00 PM St. Louis Metropolitan Medical Society Caucus.

2:00-
3:30 PM *Scientific Session*.
2:00 *"Pharmacokinetics of Therapeutic Drug Monitoring."* Dwight K. Oxley, M.D., Associate Pathologist, St. Joseph Hospital, Kansas City.
2:30 *"Quality Control of Therapeutic Drug Monitoring."* Martin R. Lohff, M.D., Assistant Professor of Pathology, University of Nebraska, Lincoln, Neb.
3:00 *"The Pathologist as a Clinical Consultant."* Donald A. Senhauser, M.D., Chairman, Department of Pathology, Ohio State University, Columbus, Ohio.
Moderator: James M. Flynn, M.D., Kansas City.
Sponsored by the Missouri Society of Pathologists.

2:00-
3:30 PM *"Endocrine-Metabolic Emergencies, Selected Aspects."*
Speaker: Stephen Hamburger, M.D., Associate Professor of Medicine, University of Missouri-Kansas City.
Moderator: Stephen Hamburger, M.D., Kansas City.
Sponsored by the Missouri Society of Internal Medicine.

2:00-
3:30 PM *"Pediatric Trauma."*
Business meeting to follow scientific session.
Sponsored by the Missouri State Surgical Society.

2:30-
4:00 PM Missouri State Medical Foundation Annual Meeting.
3:30 PM Intermission to view exhibits.
4:00 PM **HOUSE OF DELEGATES, SECOND SESSION.**
5:30-
7:00 PM Reception Honoring Incoming MSMA Auxiliary President.
6:00 PM Reference Committee Meetings.
6:30 PM Missouri State Surgical Society Cocktails and Dinner.
6:30 PM Missouri Psychiatric Association. Business Meeting, Cocktails and Dinner.
6:30 PM Missouri Society of Pathologists. Cocktails and Dinner.
7:00 PM Missouri Dermatological Society. Cocktails and Dinner.
7:30 PM Missouri Ophthalmological Society, Inc. Board of Directors Meeting and Dinner.

SATURDAY, APRIL 3

7:30 AM MSMA Auxiliary Public Affairs Breakfast.
7:30 AM Missouri Ear, Nose and Throat Association Breakfast and Business Meeting.
7:30 AM Missouri Society of Anesthesiologists Breakfast.
8:00 AM Registration.
8:00 AM-
12:15 PM *Scientific Session*. Sponsored by the Missouri OB/GYN Society. Crown Center Hotel.
8:00 *Welcome*. Robert Kretzschmar, M.D., Truman Medical Center, Kansas City.
8:15 *"The Pap Smear in Perspective,"* George E. Volk, M.D., Assistant Clinical Professor, University of Missouri-Kansas City School of Medicine, Truman Medical Center, Kansas City.
9:00 *"The Pap Smear as Seen by the Cytopathologist."* Othello Dale Smith, M.D., Chief Pathologist, Baptist Memorial Hospital, Kansas City.
9:30 Coffee Break.
10:00 *"Conization of the Cervix."* George E. Volk, M.D.
10:20 *"The Laser as an Energy Source."* James H. Goodson, M.D., Associate Professor of OB-GYN, Baylor Medical Plaza, Dallas, Tex.
10:50 *"Use of the Laser in Private Practice."* Robert Slickman, M.D., Clinical Associate Professor, University of Missouri-Kansas City School of Medicine, Truman Medical Center, Kansas City.
11:25 *"Laser in Infertility."* Steven N. Taylor, M.D., Clinical Assistant Professor, Tulane University School of Medicine, New Orleans, La.
11:55 *"Management of the Abnormal Pap Smear."* Javier Magrina, M.D., Associate Professor of Oncology, Department of OB-GYN, University of Kansas College of Health Sciences, Kansas City, Kan.
12:15-
12:30 Questions and Answers.
Moderator: George Fuchs, M.D., Columbia.

8:00-
11:00 AM Complimentary Coffee and Rolls.
8:30-
12:00 NOON *Scientific Session*. Sponsored by the Missouri Society of Anesthesiologists.
8:30 AM *Recent Advances In Respiratory Care*. Speaker: H. Michael Marsh, M.D., Director, Respiratory Intensive Care Unit, Mayo Clinic, Rochester, Minn.
9:15 AM *Respiratory Care for Open Heart Patients*. Speaker: H. Michael Marsh, M.D.
10:00 AM *Medical Aspects of Care for Patients with Heart Disease*. Speaker: Bernard Levi, M.D., Director, Cardiovascular Laboratory, Menorah Medical Center, Kansas City.
10:45 AM Round Table Discussion — *The Role of an Anesthesiologist in the ICU*.
James Malow, M.D., Chairman, Department of Anesthesiology, St. Joseph Hospital, Kansas City.
Peter Mestad, M.D., Director, Department of Anesthesiology, Children's Mercy Hospital, Kansas City.
H. Michael Marsh, M.D.

9:00-
12:00 NOON *Scientific Session*. Sponsored by the Missouri State Allergy Association, Missouri Dermatological Society and the Missouri Academy of Pediatrics.
9:00 AM *Hymenoptera Sensitivity*. Speaker: David B. K. Golden, M.D., Assistant Professor of Medicine, Johns Hopkins University, Baltimore, Md.
9:40 AM *Insulin Allergy and Insulin Resistance*. Speaker: Leonard Cohen, M.D., Fellow, Barnes Hospital, St. Louis.

10:00 AM Coffee Break.
Scientific Session. (Continued)
10:20 AM *Urticaria and Its Unusual Aspects*. Speaker: David B. K. Golden, M.D.
11:00 AM *"Factors Affecting Theophylline Metabolism — A Case Report."* Joseph Anderson, M.D., Fellow, St. Louis University, St. Louis.
11:20-
11:40 AM Panel Discussion. Panelists: David B. K. Golden, M.D.
Leonard Cohen, M.D.
Joseph Anderson, M.D.

9:00-
10:30 AM *"Corneal Graft Rejection Keratoconus."*
Speaker: Jay H. Krachmer, M.D., Professor of Ophthalmology, University of Iowa Hospitals & Clinics, Iowa City, Iowa.
Moderator: Joel M. Leibsohn, M.D., Independence.
Sponsored by the Missouri Ophthalmological Society, Inc.

9:00-
10:30 AM *"Sinus Tumors."*
Speaker: Helmuth Goepfert, M.D., Chairman, Department of Head and Neck Surgery, M.D. Anderson Hospital, Houston, Tex.
Moderator: Michael Hughes, M.D., Kansas City.
Sponsored by the Missouri Ear, Nose and Throat Association.

9:00-
10:30 AM *"Effect of Infarct Size and Location on Acute and Chronic Prognosis."*
Speaker: Robert Roberts, M.D., Washington University School of Medicine, St. Louis.
"Coronary Angioplasty and Thrombolytic Therapy for Coronary Artery Disease."
Speaker: Geoffrey O. Hartzler, M.D., Mid-America Heart Institute, St. Luke's Hospital, Kansas City.
Moderator: Ben D. McCallister, M.D., Kansas City.
Sponsored by the American Heart Association, Missouri Affiliate, Inc.

9:00-
10:30 AM *"Cancer Practice for the General Physician."*
Speaker: John W. Yarbro, MD., Ph.D., Department of Medicine, Division of Hematology-Medical Oncology, University of Missouri-Columbia.
Speaker: Michael C. Perry, M.D., Department of Medicine, Division of Hematology-Medical Oncology, University of Missouri-Columbia.
Sponsored by the American Cancer Society, Missouri Division, Inc.
9:00 AM-
12:00 NOON American Medical Women's Association Workshops.
9:30 AM **MEET YOUR AMA DELEGATES.**

9:30 AM-
12:00 NOON Scientific Session.
9:30 *"Management of Postoperative Pain in Caesarean and Hysterectomy Surgical Procedures."* Otakar Machek, M.D., St. Louis.
10:00 *"Recent Advances in the Care of the Geriatric Amputee."* Franz U. Steinberg, M.D., St. Louis.
10:30 *"Neuromuscular Complications Following Electrical Injury."* George Varghese, M.D., Kansas City.
11:00 *"Does a Good Clinician Really Need an Electromyogram?"* Walter J. Treaner, M.D., Reno, Nev.
Moderator: Charles R. Kelly, M.D., Kansas City.
Sponsored by Physical Medicine and Rehabilitation.

10:00-
11:30 AM Missouri Radiological Society Board of Directors Meeting.
10:30 AM Intermission to view exhibits.
10:30 AM-
5:00 PM Missouri Ophthalmological Society, Inc. All Day Meeting.
11:00 AM-
12:30 PM *"Regional Anesthesia."*
Speaker: George Hoech, M.D., Kansas City
Sponsored by The Missouri Academy of Family Physicians.
11:00 AM-
12:30 PM *"Pancreatico-Biliary Disease."*
Sponsored by the Missouri State Surgical Society.
11:30 AM Missouri Radiological Society Board of Directors Luncheon.
12:00 NOON American Medical Women's Association Luncheon.
12:00 NOON Missouri State Neurological Society Luncheon. Board Meeting.
12:00 NOON Physical Medicine and Rehabilitation Luncheon, Business and Board Meeting.
12:00 NOON Missouri State Allergy Association Luncheon.
12:00 NOON-
1:00 PM Missouri Ophthalmological Society, Inc. Luncheon.
12:00 NOON Missouri Society of Anesthesiologists Luncheon and Business Meeting.
12:30 PM Fifty-Year Club Luncheon.
1:00 PM Missouri OB-GYN Society Luncheon and Business Meeting.
1:00-
4:15 PM *Scientific Session.*
"Interventional Radiology." G. David Dixon, M.D., Kansas City.
"C.T.: Newer Otologic Applications." Kendrick C. Davidson, M.D., Kansas City.
"Xero Mammographic Diagnosis of Breast Cancer." Stephen Kunz, M.D., Kansas City.
"Computed Tomography of the Colonic Wall." James K. Fisher, M.D., Kansas City.
Business Meeting to follow Scientific Session.
Sponsored by the Missouri Radiological Society.

2:00-
3:30 PM *"New Drugs: Uses and Abuses."*
Speaker: David R. Rush, Pharm.D., Associate Professor of Clinical Pharmacy, UMKC Schools of Medicine and Pharmacy, Department of Community and Family Medicine, Section of Clinical Pharmacology, Truman Medical Center-East, Kansas City.
Sponsored by The Missouri Academy of Family Physicians.

2:00-
3:45 PM *Scientific Session.* Sponsored by the Missouri State Allergy Association, Missouri Dermatological Society and the Missouri Academy of Pediatrics.
2:00 *Dermatology and Allergic Diseases.* Speaker: Larry Millikan, M.D., Tulane University, New Orleans, La.
2:40 *"Fluorescent Antibody Diagnosis and Herpes."* Joe Phaneuf, M.D., Fellow, University of Missouri-Columbia.
3:00 *"Staph, A Removal of Blocking I_gG Antibody."* James Oggel, M.D., Fellow, University of Missouri-Kansas City.
3:20 Panel Discussion. Panelists: Larry Millikan, M.D.
Joe Phaneuf, M.D.
James Oggel, M.D.
3:45 PM Missouri State Allergy Association Business Meeting.
2:00-
4:30 PM *Scientific Session.* Sponsored by the Missouri Society of Anesthesiologists.
2:00 PM *Mayo Clinic's Experience in Pain Management.* Speaker: Lee Nauss, M.D., Co-Director, Pain Clinic, Mayo Clinic, Rochester, Minn.

2:45 pm *Pain Management in a Community Hospital Setting*. Speaker: George Hoech, M.D., Kansas City.
3:30 pm Round Table Discussion: *The Role of the Anesthesiologist in Pain Management*.
Kurt Krueger, M.D.
Steven Waldman, M.D., Director, Pain Clinic, Menorah Medical Center, Kansas City
Lee Nauss, M.D.
George Hoech, M.D.
5:00-6:30 pm Missouri University Alumni Reception.
5:00-6:30 pm St. Louis University Alumni Reception.
5:00-6:30 pm Washington University Alumni Reception.
6:30 pm MSMA Social Hour preceding Annual Banquet.
7:15 pm MSMA Annual Banquet.

SUNDAY, APRIL 4

7:30 am House of Delegates Breakfast and Final Session.

Preliminary Program — 57th Annual Convention

MSMA AUXILIARY

Hyatt Regency Hotel, Kansas City **April 1-3, 1982**

Thursday, April 1

9:00 am-3:00 pm Benefit Auction items to be received in Regency Atlanta A Room.
10:00 am-4:00 pm Registration and Information. Regency Foyer.
10:30 am Auxiliary Report to the MSMA House of Delegates.
Mrs. Jerry Meyer, President
12:00 Noon Finance Committee Meeting. President's Suite.
3:30 pm **Pre-Convention Board Meeting.** Chouteau B Room.
6:30 pm **Fourth Annual Benefit Auction of the AMA-ERF and MSMF.** Regency Atlanta-B Room.

Friday, April 2

7:15-11:30 am MSMA Complimentary Coffee and Rolls. Exhibit Area.
8:00 am-Noon Registration and Information. Regency Foyer.
8:00 am **General Assembly-Business Meeting.** Empire A & B Rooms.
Keynote Address: Mrs. Torrence Payne, Newburgh, N.Y., President-Elect of the AMA Auxiliary.
12:00 Noon Bus to **Awards Luncheon** at the Alameda Plaza.
3:00-4:00 pm **Southern Medical Association Auxiliary Get-Together.** Honoring Mrs. Keith D. Jones, Warrensburg, President. President's Suite.
5:30-7:00 pm Reception honoring Mrs. Sam Gaston, Joplin, MSMA Auxiliary President-Elect. Regency Atlanta-A Room.
6:30 pm **Dutch Treat Dinner** (TBA). Meet in Hyatt Regency Lobby.

Saturday, April 3

7:30 am **Public Affairs Breakfast.** Regency Chicago A Room.
8:00 am-Noon Registration and Information. Regency Foyer.
9:00 am **General Assembly — Workshop.** Regency San Francisco A & B Rooms.
Greetings from Southern Medical Association, Mrs. Keith D. Jones, Warrensburg, President.
12:00 Noon **Installation Luncheon.** Regency Chicago A Room.
2:00 pm Post-Convention Board Meeting. Regency Atlanta-B.
6:30 pm Social Hour. Regency Foyer.
7:15 pm MSMA Annual Banquet. Regency San Francisco and Chicago Rooms.

Your MSMA-Sponsored Insurance Programs

These Programs are especially designed for MSMA members' protection needs.

• Personal Disability Income

Benefits are available up to $2,166 per month. Life Time Accident/to Age 65 Sickness Coverage — flexible waiting periods available from seven days up to one year — the plan is applicable for the Individual or Incorporated Physician. Coverage for private flying is available.

This individual contract with Special Renewal Guarantees is the ideal foundation for your Disability Income Protection Program.

• Office Overhead Expense

Disability Insurance Coverage up to $3,000 per month to pay your continuing office expenses while you are unable to work due to illness or injury. Benefits are payable after 30 days continuous disability with a maximum benefit period of 24 months.

Your premium is a tax-deductible business expense — your individual contract has Special Renewal Guarantees — benefits may be assigned to your corporation.

• Accidental Death and Dismemberment

Up to $150,000, 24-hour worldwide coverage while at work or play — including permanent total disability benefit. Coverage on spouse and children available — also your employees. No medical history required — low group cost.

• Hospital Indemnity Plan

Pays you a Cash Benefit for each day of hospital confinement due to injury or illness. . . . Pays *in addition to* other insurance you may have . . . your choice of amount $20.00 to $100.00 Daily Benefit. Family coverage available.

Be sure your Disability Income Insurance Plan is up-to-date and adequate for your needs. Professional service is available on a personal basis from your Administrators.

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Report of the MSMA Committee on Constitution and Bylaws (A-82)

In accordance with Article VII of the Constitution of the Missouri State Medical Association, the Committee on Constitution and Bylaws submits the following changes for consideration by the MSMA House of Delegates at the April, 1982, Annual Session.

In reviewing the Constitution and Bylaws, the Committee became aware of a confusing situation whereby the word "session" is used to denote both the Association's annual meeting and the meetings of the House during the annual meeting. This has led to some problems, according to the Speaker of the House, so the Committee proposes that the annual meeting of the Association be termed the "Annual Convention" and that the gatherings of the House of Delegates during the Annual Convention be termed "Sessions." Most of the changes listed below concern this differentiation.

Other changes proposed by the Committee include a rewording of Bylaws Chapter III, Section 1 (a) to clarify requirement for introduction of resolutions; a renumbering of various Sections in Bylaws Chapters III and IV; deletion of some redundant language in Chapter II, Section 3, Chapter III, Section 1(a) and Chapter V, Section 5 and a few minor editorial changes.

The changes in Article VI and Article XI of the Constitution will be placed before the House in 1982 for final vote in 1983.

In reprinting the entire Constitution and Bylaws of the Association, new language is underlined while deleted language is bracketed.

ROBERT R. MACDONALD, *Chairman*
KIRBY L. TURNER
ROY GILLISPIE
MILES C. WHITENER
R. STACY LONG

Constitution

ARTICLE I. NAME OF THE ASSOCIATION

The name and title of this organization shall be the Missouri State Medical Association.

ARTICLE II. PURPOSE

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

ARTICLE III. MEMBERSHIP

Membership in this Association shall be limited to and include all members in good standing in component societies which hold charters from this Association.

ARTICLE IV. HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of this Association and shall consist of delegates elected by the component societies as well as all Past-Presidents of the Association, the Speaker and Vice-Speaker, who will serve as Delegates-at-Large. It shall elect a Speaker and Vice-Speaker from its body. Its Secretary shall be the Secretary of the Missouri State Medical Association.

ARTICLE V. COUNCIL

The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District, and a duly elected medical student Councilor. A majority of voting members of the Council shall constitute a quorum.

ARTICLE VI. SESSIONS AND MEETINGS

Section 1. The Association shall hold an annual Spring [session] Convention of the House of Delegates, at places fixed by the House of Delegates, the time of which shall be fixed by the Council. During the Annual Convention, the House shall hold at least three sessions.

Sec. 2. Special meetings of the Association or the House of Delegates may be called by a two-thirds vote of the Council and shall be called upon a petition signed by members equal in number to one third of the total number of delegates certified for the last Annual [Session.] Convention.

ARTICLE VII. OFFICERS

Section 1. The Officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, a Speaker and a Vice-Speaker of the House of Delegates and Councilors selected as provided for.

Sec. 2. The Officers shall be elected annually. The term of Councilors and Vice-Councilors shall be two years, except for the duly elected medical student Councilor who shall be elected for a one-year term. Half of the membership of the Council shall be elected each year. The Secretary and Treasurer shall be elected by the Council from the general membership. The delegates present from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilors and Vice-Councilor from that district. The Delegates from the medical school component societies shall meet prior to the last day of the Annual Session and elect a medical student Councilor and Vice-Councilor. In the event of death, resignation or removal of any Councilor, the Vice-

Councilor shall automatically fill the vacancy. The officers shall serve until their successors are elected and installed.

ARTICLE VIII. FUNDS, EXPENSES AND BUDGET

Funds shall be raised by a per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates. Funds may also be raised in any other manner approved by the House of Delegates. The Council shall submit an annual budget to the House of Delegates. All resolutions providing for appropriations shall be referred to the Council and all appropriations approved by the Council shall be included in the annual budget.

ARTICLE IX. REFERENDUM

At any General Meeting of the Association, it may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote. A majority vote of all members of the Association shall determine the question.

Petitions signed by 10% of the active members of the Association, including petitioners representing at least one half of the component Medical Societies, will initiate a referendum regarding changes in the Constitution and Bylaws or questions before the House of Delegates. A two-thirds vote of all active members of the Association responding will determine the question.

ARTICLE X. SEAL

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XI. AMENDMENTS

The House of Delegates may amend any article of the constitution by a two-thirds vote of the delegates present and voting in any Annual [or Interim Session,] Convention, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

Bylaws

CHAPTER I. MEMBERSHIP

Section 1. Members of this Association shall be those individuals whose names have been certified by secretaries of component societies to the Secretary of this Association that they are duly elected members of a component society and are legally qualified physicians practicing in Missouri except as otherwise provided. Each member must be of good moral and professional standing, and must not support, nor practice, nor claim to practice any exclusive system of medicine.

Sec. 2. No person who is under sentence of suspension or expulsion from any component society of this Association or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Association.

Sec. 3. There shall be four classes of members as follows:

Active members shall be limited to those members of component societies who (1) hold the degree of Doctor of Medicine or Bachelor of Medicine, and (2) if permitted by the bylaws of the component society, members who hold the degree of Doctor of Osteopathy, and (3) are entitled to exercise the rights of active membership in their component societies, as determined by their component societies, subject to the provisions of these Bylaws.

Junior members shall be limited to those members of component societies who are serving a full-time [training internship or residency] postgraduate training program in a hospital approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Student Members shall be limited to those members of component societies who are pursuing a course of study leading to the degree of Doctor of Medicine in a medical school approved by the American Medical Association and shall enjoy all of the privileges of active membership.

Honor members shall be limited to Honor members of component societies, which societies have requested that active members who have reached advanced years and have long served the Association and the profession be made Honor members of the Association. They shall enjoy all the privileges of active membership and shall be exempt from the payment of dues.

CHAPTER II. GENERAL MEETINGS

Section 1. The General Meetings shall be open to all registered members and guests.

Sec. 2. Any paper read before this Association shall be considered for publication in the Journal if the author so desires. Such papers may be given publication priority over regularly submitted papers but shall be subject to the same editorial review and selection policies.

Sec. 3. No person in the active practice of medicine in the State of Missouri shall appear on the program of the Association unless he or she is a member of the Missouri State Medical Association [or an affiliated association or organization.]

CHAPTER III. HOUSE OF DELEGATES

Section 1 [a]. The House of Delegates shall meet annually at the time and place of the Annual [Session] Convention. [It shall remain in continuous session on the first day of the Annual Session and complete the work coming before it at that session.]

All resolutions to be considered by the House of Delegates must be received at the Association office 45 days prior to the opening session of the House for publication in the handbook. Any resolution to be introduced at the opening session [after that time] must be made available to the House of Delegates 24 hours before the opening session [in which it is to be introduced]. These will be accepted as business of the House at the Opening Session and will be referred to an appropriate Reference Committee. Resolutions introduced at the Opening Session but which did not meet the 24-hour deadline will be referred to a Reference Committee only if approved by two thirds of the Delegates voting. Sufficient copies of the resolution or funding for same must be supplied by the individual or society introducing the resolution.

At the second session of the House of Delegates [, the same procedure would be followed, but such] introduction of Resolutions would be allowed only if approved by two thirds of the delegates voting. The House of Delegates shall meet on the last day of the [annual session] Annual Convention to receive the report of the Nominating Committee and complete unfinished business and the election of officers. The same procedure with regard to resolutions would be followed at that session, but it would then take a unanimous vote of the House to allow such introduction. At the discretion of the Speaker, these conditions would not apply for resolutions of good wishes, condolences, congratulations and others of a personal nature.

Sec. 2. Delegates to the House of Delegates shall be allotted according to the following formula:

(a). Each component society shall be entitled to send each year one delegate or one alternate for each 25 full paid members or fraction thereof in the Association on December 31 of the previous year.

(b). One additional delegate or alternate is allowed for each 100 members or major fraction thereof as of December 31 of the previous year.

(c). When a component society's full paid membership as of December 31 of the previous year reaches 1,000, that society shall be entitled to 30 additional delegates or alternates.

(d). When a component society's full paid membership as of December 31 of the previous year reaches 2,000, that society shall be entitled to an additional 50 delegates or alternates.

(e). Each component society which is composed of two or more counties shall be entitled to at least one delegate from each of the counties having one or more member physicians practicing in the county of which the component society is composed; however, such delegates from multi-county component societies must practice or reside in the county they represent. Alternate delegates may be elected from the entire membership of the component medical societies.

(f). All Past-Presidents of the Association, the Speaker and Vice-Speaker shall serve as Delegates-at-Large.

(g). Only duly elected delegates have the privilege of the floor at meetings of the House of Delegates. However, any delegate may request the privilege of the floor for any other individual, which privilege may be granted or denied by the speaker, subject to disapproval by a majority vote of the House of Delegates.

[Sec. 2A.] Sec. 3. Each Medical School Component Society shall be entitled to send each year two delegates, elected by the component society, to the House of Delegates at the Annual [Session] Convention. Each delegate shall be a member in good standing with this Association and the Component Medical Society. Such student delegates shall enjoy all the rights and privileges of all other delegates.

[Sec. 3.] Sec. 4. Forty delegates shall constitute a quorum of the House of Delegates. All meetings of the House of Delegates shall be open to members of the Association.

[Sec. 4.] Sec. 5. From among members of the House of Delegates, the Speaker shall appoint reference committees to which reports and resolutions, on a majority vote of the House of Delegates, shall be referred as follows:

Reference Committee on Amendments to the Constitution and Bylaws.

Reference Committee on Resolutions.

Reference Committee on Miscellaneous Affairs.

Reference Committee on Medical Education and Public Welfare.

Reference Committee on Reports of Officers.

The Speaker may appoint such other reference committees as he may deem necessary, upon approval of the House of Delegates.

The President shall appoint a Committee on Credentials.

[Sec. 5.] Sec. 6. The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

[Sec. 6.] Sec. 7. The House of Delegates shall divide the state into Councilor Districts specifying which counties each district shall include and, when the best interest of the Association and the profession will be promoted thereby, organize in each a district medical society of which all members of the component societies shall be members.

[Sec. 7.] Sec. 8. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate on their reports.

[Sec. 8.] Sec. 9. The House of Delegates shall receive and act upon a complete and detailed annual audit of receipts and expenses of the preceding year and a proposed budget for the current calendar year which shall have been prepared by the Council and submitted to the component societies at least four weeks prior to the Annual [Session] Convention. These shall be published in the Journal.

[Sec. 9.] Sec. 10. The following shall be the general order of business of the House of Delegates for the first [meeting] session of the [session] convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Report of officers.
6. Report of committees.
7. Unfinished business.
8. New business.

The following shall be the general order of business of the House of Delegates for the last [meeting of the] session of the Convention.

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll Call.
4. Reading and adoption of minutes.
5. Report of the Nominating Committee.
6. Election of officers.
7. Reports of officers.
8. Reports of committees.
9. Unfinished business.
10. New business (see Sec. 1, Chap. III).
11. Installation of officers.
12. President's appointments and installation of members to committees.
13. Selection of the place for the next Annual [Session] Convention.

At any [meeting] session of the House of Delegates, the order of business may be changed by a two-thirds affirmative vote of the members present and voting.

Chapter IV. Election of Officers

Section 1. The President, on the first day of the Annual [Session] Convention, shall select a Committee on Nominations consisting of eleven delegates, one from each Councilor District and one from a Medical School component society. The Committee on Nominations shall determine that proposed candidates for office are qualified and willing to serve and shall report to the House of Delegates in the form of a ticket containing the names of one or more members for each of the offices listed in Article VII of the Constitution, which are to be filled at the Annual [Session] Convention, excepting the Secretary and Treasurer who are elected by the Council from the general membership.

Sec. 2. All elections shall be by written ballot. A majority of the votes cast shall be necessary to elect.

Delegates and Alternates for the American Medical Association shall be elected as follows:

The Nominating Committee shall propose one or more candidates for each delegate position for a full two-year term, one or more candidates for each alternate position for a full two-year term, and one or more names for each unexpired position.

When a nomination for AMA delegate term is contested, the AMA delegates shall be elected by ballot. Each MSMA delegate may have one vote for each delegate to be elected and each vote shall be cast for a different nominee. A nominee is elected if he receives votes on the majority of the ballots cast and has the highest number of votes cast for that position. If all vacancies for AMA delegates are not filled on the first ballot, then subsequent ballots will be taken with the nominee receiving the fewest number of votes cast in each subsequent ballot dropping out of consideration on the next ballot and each MSMA delegate casting one vote for each position available in each subsequent ballot until one nominee for each position is elected.

The election for AMA alternates and an election to fill an unexpired term will be conducted in the same manner.

In case no nominee for general offices of the Association (see Article VII, Constitution) receives a majority of the votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 3. Nothing in this chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Sec. 4. Delegates present at the Annual [Session] Convention from Councilor Districts whose Councilors' and Vice-Councilor's terms expire shall hold meetings on or before the morning of the last day of the Annual [Session] Convention and elect Councilors and a Vice-Councilor for their districts for a term of two years. The names of the elected Councilors and Vice-Councilor shall be given on prescribed forms to the Secretary for presentation to the House of Delegates. Each candidate for Councilor or Vice-Councilor must reside or practice in the district for which he is elected.

[Sec. 4A.] Sec. 5. Each Councilor District shall be entitled to one Councilor for each 400 full paid members or portion thereof as of December 31 of the preceding year. Each District shall be entitled to one Vice-Councilor.

[Sec. 4B.] Sec. 6. Delegates from the four Medical School Component Societies shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the medical student component societies shall serve on an annual renewable basis.

[Sec. 5.] Sec. 7. The Speaker and Vice-Speaker shall not serve more than three consecutive terms.

[Sec. 6.] Sec. 8. The Speaker shall appoint a parliamentarian to serve as such during the sessions of the House of Delegates at each Annual [Session] Convention and upon whom the Speaker may call before deciding points of order or procedure.

Chapter V. Duties of Officers

Section 1. The **President**, or his designated representative, shall preside at all scientific sessions of the Association. He shall preside at the House of Delegates in the absence of the Speaker or Vice-Speaker and until their successors are elected. He shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such other duties as custom or parliamentary usage requires. He shall be the real head of the profession of the state and assist the Councilors in building up the component societies and in making their work more practical and useful.

Sec. 2. The **President** and the **President-Elect** shall be members of the Council and shall attend all meetings of the Council. The President-Elect shall assume the office of the President at the Annual [Session] Convention following his election to the position of President-Elect. Should the office of President-Elect become vacant through death or otherwise, the Council may fill the vacancy by appointment until the next Annual [Session] Convention.

Sec. 3. The **Vice-Presidents** shall assist the President in the discharge of his duties. Prior to the meeting of the Nominating Committee, the President-Elect shall recommend to the Nominating Committee the name of a member to serve as First Vice-President. In the event of the death, resignation, or removal of the President, the First Vice-President shall serve as President for the unexpired term.

Sec. 4. The **Treasurer** shall give bond in the sum of $50,000. He shall demand and receive all funds due the Association, together with bequests and donations. Money shall be paid out of the treasury only on the written order of the President and Secretary, the President and Treasurer or the Treasurer and Secretary. The Treasurer shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his actions and of the state of the funds in his hands.

Sec. 5. The **Secretary** shall attend the General Meetings of the Association and the [meetings] sessions of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be Secretary of the Council and shall keep a record of its proceedings. He shall be the custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association that come into his hands. He shall provide for the registration of the members and delegates at the Annual [Session] Convention. He shall, with the cooperation of the secretaries of the component societies, keep a register of all the legal practitioners of the state by counties, noting on each his status in relation to his component society, and shall transmit a copy of this list to the American Medical Association, transmitting to its Secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council and shall make an annual report to the House of Delegates. He shall supply all component societies with the necessary blanks for making their reports and shall collect from them the regular per capita dues and assessments and turn the same over to the Treasurer. [The amount of his salary shall be fixed by the Council.]

Chapter VI. Council

Section 1. The Council shall meet during the Annual [Session] Convention and at such times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual [Session] Convention to organize. The Council shall elect a Chairman and a Vice-Chairman for a term of one year. The Chairman may be reelected to serve not more than four consecutive terms of one year each. The Council shall, through its Chairman, make an annual report to the House of Delegates.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and to keep in touch with the activities of and aid in the betterment of the component societies of his district. He shall make reports of his work and the condition of the profession of each county in his district to the Council. The necessary traveling expenses incurred by each Councilor in the line of duties herein imposed may be allowed on a properly itemized statement submitted monthly and within the current year, including his expense in attending the Annual [Session] Convention of the Association. No Councilor shall be eligible for the position of Delegate to the House of Delegates during his term of office as Councilor, nor shall he vote in the House of Delegates.

Sec. 3. The Council shall be the executive body of the Association and between [sessions] the Annual Conventions shall exercise the power conferred on it by the House of Delegates under the Constitution and Bylaws.

Sec. 4. The District Councilors shall select one of their number who, together with two members of component societies within the Council District selected by the District Councilors, shall serve as a Board to hear and by a majority vote adjudicate any questions involving the right and standing of members, either in relation to other members or to component societies or to the Association, and all matters of discipline affecting the conduct of members of component societies, or other matters.

The Council shall be the appellate Board of Censors of the Association. It shall hear and adjudicate all matters on appeal from the decision of the Councilor Board; it shall hear and adjudicate matters of an ethical nature brought before the House of Delegates or [the] a general meeting [which] and these matters shall be referred to the Council without discussion. On original decision or appellate determination, its decision shall be final unless appealed to the then convened meeting or the next meeting of the House of Delegates.

Sec. 5. Charters shall be issued to component societies only on approval of the Council and shall be signed by the President and Secretary of this Association. Upon the recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and Bylaws.

Sec. 6. In sparsely settled sections, the Council shall have authority to organize the members of two or more counties into societies, to be suitably designed so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 7. The Council shall provide for and supervise the issuance of all publications of the Association including proceedings, the transactions and memoirs, and shall have authority to appoint an Editor and such assistants as it deems necessary. It shall prescribe the methods of accounting and through a committee of three of its members, to be known as a Committee on Auditing and Appropriations, shall audit all accounts of this Association. The Council shall adopt an annual budget providing for the necessary expenses of the Association for the following calendar year. This budget shall be prepared and presented for consideration in the last quarter of each year by the Committee on Auditing and Appropriations. A complete and detailed report shall be submitted to the component societies as provided in Section 8, Chapter III. The Council shall submit an annual report of the House of Delegates which shall specify the character and cost of the publications of the Association, the amount and character of all its property, and shall provide full information concerning the management of all affairs of the Association which the Council is charged to administer.

Sec. 8. The Council shall appoint at least six months prior to the Annual [Session] Convention, a committee consisting of three of its members to be known as the Committee on Arrangements for the Annual [Session] Convention. On recommendation of the Committee, the Council shall appoint a Chairman of a Local Committee on Arrangements, who shall be a member of the component society of the county in which the Annual [Session] Convention is to be held, and who shall appoint and organize from the members of this component society the personnel of the Local Committee on Arrangements. The Local Committee on Arrangements shall serve as host for the Annual [Session] Convention and shall also act in an advisory capacity for the staff of the Executive Secretary of the Association who is responsible for arrangements for the Annual [Session] Convention.

Sec. 9. The Council shall by appointment fill any vacancy in office not otherwise provided for which may occur during the interval between Annual [Sessions] Conventions of the House of Delegates; the appointee shall serve until his successor has been elected and has qualified.

Sec. 10. The salaries of all employees of the Association shall be fixed by the Council.

Sec. 11. The Council shall provide such headquarters for the Association as may be required to conduct its business properly.

Sec. 12. The Council shall be empowered to elect an Executive Secretary and Assistant Executive Secretary and such other personnel as may be necessary, who need not be members of the Missouri State Medical Association, each of whom shall perform such duties as the Council may designate and receive such salary and serve for such periods and under such conditions as the Council may determine.

Chapter VII. Committees and Commissions

Section 1. Standing Committees of the Missouri State Medical Association, the chairman of which shall be appointed by the Association President unless otherwise provided in these Bylaws, will be as follows:

Executive Committee.
Committee on Constitution and Bylaws.
Committee on Publication.
Committee on Legislative Affairs.
Committee on Planning.
Committee on Voluntary Health Agencies.
Committee on the Impaired Physician.

The **Executive Committee** shall consist of the Association President, President-Elect, Secretary, Treasurer, Council Chairman and Council Vice-Chairman. The President of the Association shall be Chairman of the Executive Committee. The Executive Committee shall plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Secretary's Office between meetings of the Council, but shall be responsible at all times to the Council.

The Committee on **Constitution and Bylaws** shall consist of five members named by the President and shall propose such amendments to the Constitution and Bylaws as are deemed wise and expedient and bring before the House of Delegates such amendments as it or other members of the Association may present for consideration. The President shall appoint one member for one year, two members for two years and two members for three years. As the term of each expires, his successor shall be appointed for a term of three years.

The Committee on **Publication** shall consist of five members and be appointed annually by the Council and shall be responsible for general publication and distribution policies of the Journal. The Editor of the Journal shall be designated by the Council and also shall serve as Chairman of the Committee on Publication. The Editor shall be empowered to nominate an Editorial Board, subject to approval by the Council. The members of the Editorial Board will assist the Editor in soliciting, preparing and reviewing material for publication in the Journal.

The Committee on **Legislative Affairs** shall consist of five members of the Association, appointed annually by the President. The Committee shall consider legislative proposals affecting health problems of the people of the state and the practice of medicine and shall make recommendations to the Council and the House of Delegates as well as directing staff activities in such matters.

The **Planning Committee** shall consist of ten members to be appointed by the President. Two members shall be appointed for one year, two for two years, two for three years, two for four years and two for five years. As the term of each expires, his successor shall be appointed for a term of five years. In making such appointments, the President shall be governed by experience of the member, the size of his medical society and his geographical area, so as to have a representative committee. Age of the members shall be considered to the end that one third to one half of the committee shall be of an age group that should contemplate ten to twenty years more of active practice.

The Committee on **Voluntary Health Agencies** shall consist of five members of the Association appointed by the President. Two members shall be appointed for three years, two members for two years and one member for one year. As the term of each expires, his successor shall be appointed for a term of three years. The Committee on Voluntary Health Agencies shall provide liaison and work with all voluntary health organizations.

The Committee on the **Impaired Physician** shall consist of five members of the Association appointed by the President. Two members shall be appointed for three years, two for two years, and one member for one year. As the term of each expires, his successor shall be appointed for a term of three years. The Committee on the Impaired Physician shall plan and execute programs of professional assistance for members of this Association who may require special assistance to continue or return to their professional activities.

Sec. 2. Standing Commissions of the Missouri State Medical Association, who shall be responsible to the Council and whose chairman shall be appointed by the Association President, will be as follows:

Commission on Public Affairs.
Commission on Medical Economics, Third Party Medicine and Governmental Relations.
Commission on Continuing Education and Health Manpower.
Commission on Medical-Legal Affairs.
Commission on Interspecialty Medicine.

Subsec. a. The standing Commissions, unless otherwise provided in these Bylaws, shall consist of fifteen members serving three-year terms and the terms will be staggered so that the President will appoint five members of each Commission each year. Initially, the President will appoint five members to one-year terms, five members to two-year terms and five members to three-year terms and no member shall serve more than two consecutive terms.

Subsec. b. The Chairman of each Commission may appoint Ad Hoc Committees to carry out the Commission's programs. These Ad Hoc Committees may include any Missouri State Medical Association member.

Subsec. c. The Chairman of the Council shall appoint each year an appropriate Councilor to serve as advisor to each respective Commission.

The Commission on **Public Affairs** shall plan and execute programs designed to enhance the relationship between the public and the medical profession. The Commission shall have responsibility in the fields of industrial health, environmental health, medicine and religion, trauma, disaster medical care and national defense and other public matters.

The Commission on **Medical Economics, Third Party Medicine and Governmental Relations** shall keep close liaison and work with peer and utilization review mechanisms, insurance intermediaries and governmental agencies.

The Commission on **Continuing Education and Health Manpower** shall determine the character and scope of the scientific proceedings of the Association for each [annual session] Annual Convention as well as to make all arrangements for such [annual sessions] Annual Conventions, subject to the instructions of the House of Delegates. The Commission shall also be responsible for the entire continuing education program of the Association, shall have all matters pertaining to hospitals referred to it, shall carry on all programs in the recruitment of health manpower in professional as well as in allied health fields and shall be responsible for programs in the rural health field.

The Commission on **Medical-Legal Affairs** shall investigate and study medical-legal matters affecting the practice of medicine, make recommendations to the Council and House of Delegates and also make certain that all Association members are kept informed of important developments in this field. The Commission also may work with similar groups formed by the State Bar Association on matters of joint interest and concern as well as with governmental and insurance agencies in this field.

The Commission on **Interspecialty Medicine** shall be composed of one representative of each statewide specialty group as recognized by the Association Council. The President of the Missouri State Medical Association shall appoint annually to the Commission a representative from each of the authorized groups as submitted to him by the specialty organization. In the event that such a nominee is not submitted to him by an organization, the Association President may designate a member of the specialty group to serve on the Commission.

The Commission shall be charged with the responsibility of reviewing organization problems with respect to scientific programs, socioeconomic and legislative matters that affect their particular specialties; in addition, the Commission shall have the responsibility for programs and activities in fields relating to disease and health services involving the citizens of our state and such other matters as the Council shall direct. Also, the Commission shall provide close liaison between the various specialty organizations and the Missouri State Medical Association.

Sec. 3. Fifty percent of a Committee or a Commission should be present at an official meeting to constitute a quorum.

Sec. 4. Special committees may be appointed by the President or the Council as circumstances may demand.

Chapter VIII. Dues and Assessments

Section 1. (a). The Annual Dues of this Association shall be $115 which shall be applicable to each active member of the Association beginning in 1978 and shall be levied per capita on the active members of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of $57.50 for the first calendar year and shall be Active members; the per capita levy for junior members shall be $10.00 per year; the per capita levy for student members shall be $5.00 per year; honor members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied.

(b). An assessment of $10.00 per year on each active member of the Association shall be applicable for a three-year period beginning in 1981. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

(c). An assessment of $5.00 per year on each active member who has left his training program and is entering practice for the first time shall be applicable for one calendar year. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

Sec. 2. Three dollars of the annual dues shall be credited to the account of the Journal for each member's annual subscription. The remainder of the amount shall be credited to the general fund of the Association.

Sec. 3. The House of Delegates may, when in its judgment the best interest of the Association demands, recommend an assessment on each active, junior and student member. Such assessment shall be levied only by consent of two thirds of the members of the House of Delegates present and voting. Funds obtained from such special assessment shall be allocated only for the purposes for which such assessment is levied and in accordance with substantiating budgets. Unexpended balances from such assessments must be reported to the House of Delegates for reallocation.

Sec. 4. The Secretary of each component society shall cause to be collected and remitted to the Treasurer of this Association the per capita levies. Upon authorization of any component society, the Treasurer of this Association may collect the per capita levies directly from the members of that component society. Any member whose name has not been reported for enrollment and whose dues have not been remitted to the Treasurer of this Association on or before March 1 shall stand suspended until his name is properly reported and his dues for the current year are paid. On December 31 of each year, members delinquent in payment of dues, and assessment if such has been made, or any part thereof shall, ipso facto, forfeit their memberships. No suspended member shall be eligible to register at an [annual session] Annual Convention.

Chapter IX. Rules of Conduct

Section 1. The ethical principles governing the members of the American Medical Association shall govern members of this Association.

Sec. 2. Any member of this Association who testifies as a medical expert witness outside of the specialty of the physician represents unethical conduct. In the future, any physician who testifies as a medical expert witness outside of his specialty or logical extension of his field of expertise or who interferes with the proper administration of justice by misrepresenting his qualifications or giving false or misleading testimony will be subject to expulsion, censorship, or reprimand after due process from the Missouri State

Medical Association.

Any member of this Association who testifies as a medical expert witness without meeting the qualifications set forth in this section, shall be subject to expulsion, censorship, or reprimand after a due process hearing as set forth. An expert witness must have basic educational and professional knowledge as a general foundation for his testimony and, in addition, have current personal experience and practical familiarity with the problems being considered and be actively engaged in the practice of the medical subject under discussion.

Nothing in the above is to be construed as preventing the treating physician from testifying on the merits of the case.

Chapter X. Rules of Order

The deliberations of this Association shall be conducted in accordance with parliamentary usages as defined in *Sturgis Standard Code of Parliamentary Procedure*.

Chapter XI. Component Societies

Section 1. All component societies now in affiliation with the State Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the Council, receive charters from this Association provided that their Constitutions and Bylaws shall have been submitted to the Council and received its approval.

Sec. 2. Each component society shall be judge of the qualifications of its members, subject to review and final decision by the Council of the State Association. Every reputable and legally qualified physician or medical student who does not practice, nor profess to practice sectarian medicine, and who resides or practices in the same county, who shall apply for membership on the prescribed form and subscribe for the Journal and pay the annual dues and assessments for the current year, shall be eligible for election to membership.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation. The Council of the State Association shall have final authority to expel a member should a component county society fail to do so after being so requested by the Council.

The Council may upon request of a component society remit the state dues and assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding his disability; provided, that the component society shall remit the component society dues of such member.

The Council may, upon request of a component society, remit the state dues and assessments of a deserving member, found to fall within what is classified as a hardship case, during the period of said hardship until such time as the dues again become payable; provided that the component society shall remit the component society dues of such member.

A physician living near a component society boundary line may hold his membership in that component society most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 3. Any member who may feel aggrieved by the action of the component society in suspending or expelling him shall have the right to appeal to the Council whose decision shall be final. A component society shall at all times be permitted to appeal or refer questions involving membership to the Council of the State Association for final determination.

Sec. 4. In hearing appeals, the Council may admit oral or written evidence or both as in its judgment will most fairly present the facts.

Sec. 5. When a member in good standing in a component society moves to another jurisdiction in this state, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the jurisdiction to which he moves. Pending his acceptance or rejection by the component society to which he moves, such member shall be considered to be in good standing in the component society from which he was certified and in the State Association to the end of the period for which his dues have been paid.

A member of a component society who moves to and engages in the practice of medicine at a location in another area in which there is a component society shall forfeit his membership in this Association and the Secretary shall remove his name from the roster of members of the Missouri State Medical Association unless within one year after such change of residence he becomes a member of the component society of the area to which he has moved.

Sec. 6. Each component society shall have general direction of the affairs of the profession in its area and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician and medical student in the area. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it includes every eligible physician and medical student in the area.

Sec. 7. At some meeting in advance of the Annual [Session] Convention of this Association, each component society shall elect one or more delegates and an equal number of alternates [therefor] to represent it in the House of Delegates of this Association, in accordance with Chapter III, Section 2 [2A] or, 3 of these Bylaws. The secretary of each component society shall send a list of such delegates and alternates to the Secretary of this Association at least sixty days before the Annual [Session] Convention. Representation in the House of Delegates shall be contingent on compliance with the foregoing provisions.

Sec. 8. The secretary of each component society shall keep a roster of its members and, if practicable, a list of non-affiliated physicians, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary by the Council. He shall send a copy of the program of each meeting to his district councilor and to the Secretary of the State Association.

Sec. 9. Any component society, in a manner approved by the State Association, or the State Association with the consent of the component society affected, may undertake, organize and put into effect plans for the medical care of indigent persons or indigent groups, and low income groups, by agreements with physicians, public officials or others and by the use of contributions, cooperative funds or other means; provided, however, that a free choice of the available and participating physicians in that territory shall be allowed to the patient and that all relationships, legal or otherwise, between the physician and the patient shall be and remain as though it were strictly an individual employment.

Chapter XII. Amendments

Section 1. These Bylaws may be amended at any Annual [Session] Convention by a two-thirds vote of the delegates present and voting at that session, if the proposed amendment has been properly submitted to the House of Delegates and has laid on the table for one day.

Sec. 2. Upon the adoption of this Constitution and these Bylaws all previous constitutions and bylaws are thereby repealed.

Chapter XIII. Purpose

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
Contact: **William D. Bradshaw, M.D.**

Mar. 9	Preceptors Day
Mar. 10-11	Fifth Annual Family Practice Update Session
Mar. 24-25	Third Annual Spring Surgery Update
Mar. 29-30	28th Annual Urology Seminar (Crown Center Hotel, Kansas City)
Apr. 2-4	A Working Conference on Authority, Responsibility and Organization
Apr. 22-23	Fifth Annual Primary Pediatrics for the Primary Physicians
May 7-9	Fifth Annual Missouri Cardiovascular Conference (Tan-Tar-A, Lake Ozark)

Greater Kansas City Radiological Society

Note: 4:00 PM lectures will be held in the Dept. of Diagnostic Radiology, University of Kansas Medical Center, Kansas City, Kan.

6:30 PM lectures will be held at the Alameda Plaza Hotel, Kansas City

Mar. 10	4:00 PM Digital Radiography — Equipment and Technical Considerations 6:30 PM Digital Radiography Clinical Applications
Apr. 14	4:00 PM Percutaneous Abscess Drainage 6:30 PM Percutaneous Biopsy Techniques

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
Contact: **Ronald G. Evens, M.D., Director**

Mar. 8	City-Wide Radiology Conference — Photo-Electronic (Digital) Radiology
Apr. 14	Leroy Sante Lecture by Dr. Benjamin Felson, University of Cincinnati
May 10	City-Wide Radiology Conference — Neuroradiology

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: **Alta Bingham**

Feb. 28-Mar. 7	Traveling Medical Education Course — Kansas City Southwest Clinical Society (St. Thomas, U.S. Virgin Islands)
Mar. 18-20	Perspectives in Medical Care (Hyatt Regency Hotel)
Mar. 20-27	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Crested Butte, Colo.)
Mar. 31	Reproductive Endocrinology and Infertility (Alameda Plaza Hotel)
Apr. 1-3	Update in Obstetrics and Gynecology (Alameda Plaza Hotel)
May 6-7	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
June 5	Symposium on Physical Fitness (Crown Center Hotel)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

Contact: **David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673 or (314) 454-3873
***Contact:* Loretta Giacoletto, Office of CME**

Apr. 2-5- May 3	Fourth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (Athens, Greece)
Apr. 22	Multiple Systems Trauma: 1982
May 13-14	Ninth Annual Symposium on Obstetrics and Gynecology
May 24-28	Diagnostic Interview Schedule Training; 1982

St. Louis University Medical Center
Continuing Education
3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
***Contact:* John A. Grellner, Director**

Mar. 31- Apr. 1	Recent Advances in Pediatric Health Care-Diagnosis

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Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
***Contact:* Richard B. Oglesby, M.D.**

May 16	14th Eye Seminar: Extracapsular Cataract Extraction

1982 PAIN & STRESS MANAGEMENT WORKSHOPS

March 6 Vancouver
March 19 Portland, OR
March 26 San Francisco, CA
March 30 Springfield, MO
May 7-9 Seattle, WA
May 13-15 Springfield, MO, with 10 experts
June 11 Houston, TX
July 19 Stevens Point, WI
Nov. 6-7 Milwaukee, WI

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(608) 786-0611

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MSMA Members Receive Physician's Recognition Award

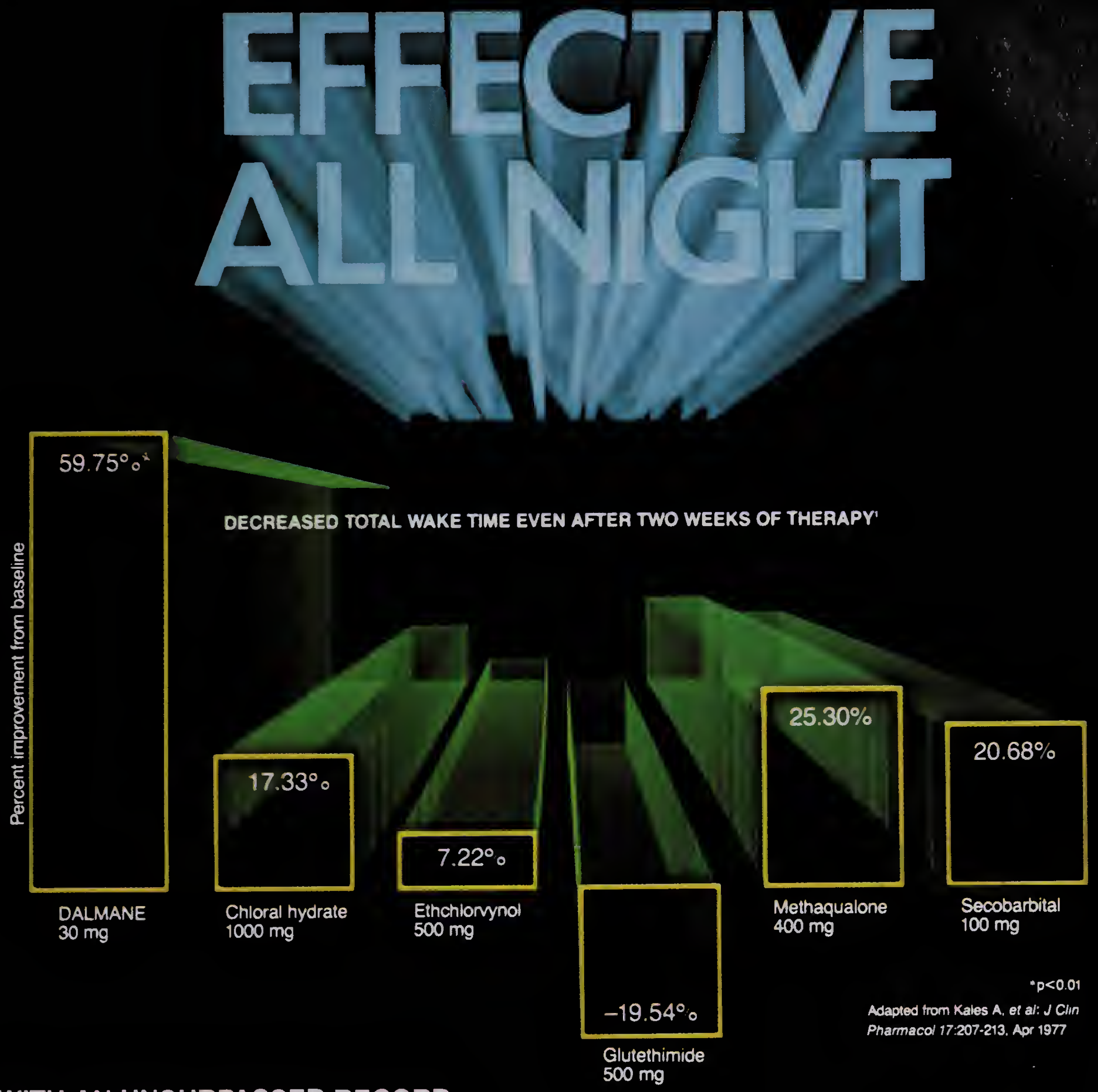
Forty-two MSMA members qualified for the MSMA-AMA Physician's Recognition Award in December, 1981.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in MISSOURI MEDICINE as they are received from the AMA.

Daniel Aks, Kansas City
Raymond A. Amoury, Kansas City
Matthias H. Backer, St. Louis
Colita L. R. Banez, St. Louis
Nelson S. Brewer, Cape Girardeau
Wilbur D. Dabbs, Neosho
Robert B. Deitchman, Clayton
Anthony P. Friedrich, Bridgeton
Royal S. Garner, Jefferson City
Melvin L. Goldman, St. Louis
Robert L. Grupp, St. Louis
June Y. Ha, Hannibal
David W. Hall, Rogersville
Trygve O. Honaas, Cape Girardeau
Bruce J. Hookerman, Bridgeton
Thomas J. Hopkins, Sedalia
Sally L. Hubbard, Springfield
Gale O. Jones, Kansas City
Pierre W. Keitges, Kansas City
Jerold E. Lancourt, St. Joseph
Joel M. Leibsohn, Independence
Joseph M. Masucci, Kansas City
Thomas A. Nicholas, Kansas City
Lawrenc W. O'Neal, St. Louis
Arthur C. Parker, Poplar Bluff
Meredith C. J. Payne, St. Louis
Bonita J. Peterson, Kansas City
Ronald R. Reimer, Cape Girardeau
Gregory J. Renner, Columbia
Ronald L. Robinson, Cape Girardeau
Hunter B. Rogers, St. Louis
John M. Roska, Kansas City
David L. Ryan, Trenton
Thomas E. Ryan, St. Louis
Kenneth F. Scott, Clinton
Charles H. Sincox, Washington
Richard J. Tully, Columbia
Julian N. Verde, St. Louis
Ronald M. Wachter, Springfield
J. Newton Wakeman, Springfield
Eugene F. White, Rolla
Thomas O. Wood, Poplar Bluff



*$p<0.01$

Adapted from Kales A, *et al*: *J Clin Pharmacol* 17:207-213, Apr 1977

WITH AN UNSURPASSED RECORD OF EFFICACY AND SAFETY

The efficacy of Dalmane (flurazepam HCl/Roche) has been documented in 185 studies involving 9141 patients suffering from one or more of the three major forms of insomnia–difficulty falling asleep, staying asleep and sleeping long enough.[2]

Relative safety was demonstrated in a large study of 2542 hospitalized medical patients. Only 3.1% of these patients reported adverse reactions–predominantly unwanted residual drowsiness. None of the reactions were considered serious by attending physicians.[3]

FOR SLEEP WITHIN 17 MINUTES[2] AND NO WORSENING OF SLEEP ON DISCONTINUATION

Rapid sleep induction, within 17 minutes on average, sets the stage for insomnia relief. And, after discontinuation of Dalmane for periods ranging up to 14 nights, no worsening of sleep compared with baseline was observed.[4]

Should insomnia recur, the patient may require guidance in setting up a regular sleep program to help provide the optimum environment for the onset of natural sleep. If hypnotic therapy is required, it should be given for the shortest time at the lowest effective dose to achieve the desired goal.

Consider other medications the patient may be taking (including alcoholic beverages) and be aware of possible drug interactions. Please note that patients should be treated for underlying physical or psychological factors before therapy with a sleep medication is undertaken.

DALMANE® Ⓒ IV

flurazepam HCl/Roche

THE STANDARD OF HYPNOTIC EFFICACY FROM THE LEADER IN SLEEP RESEARCH

ROCHE®

Please see reverse side for a summary of product information.

EFFECTIVE
ALL NIGHT

SLEEP-SPECIFIC
DALMANE® Ⓒⅳ
flurazepam HCl/Roche

One 15-mg capsule *h.s.*–recommended initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.*–usual adult dosage
(15 mg may suffice in some patients).

THE STANDARD FOR HYPNOTIC EFFICACY WITH IMPORTANT ADDED BENEFITS

- Well tolerated[2]
- No chemical interference with many commonly ordered laboratory tests, including triglycerides, uric acid, glucose, SGOT, alkaline phosphatase and total protein[5,6] (See adverse reactions section of complete product information.)
- Compatible with chronic warfarin therapy; no unacceptable fluctuation in prothrombin time reported[7,8]

UNLIKE NONSPECIFIC MEDICATIONS USED FOR SLEEP

Tricyclic antidepressants

–which are *not* sleep specific,[9] yet are sometimes used in nondepressed patients for sleep

–which can cause transient insomnia in the elderly[10]

–which can require careful monitoring in cardiovascular patients[10]

–which have strong anticholinergic effects[10]

Antihistamines

–which are *not* reliable sleep-inducing agents[11]

–which may produce stimulation instead[11]

–which have anticholinergic effects[11]

Major tranquilizers

–whose side effects may be troublesome for nonpsychotic patients[12]

–where tolerance for sedation appears rapidly[12]

Dalmane does not cause significant worsening of sleep beyond baseline levels upon discontinuation.[4]

References: **1.** Kales A, *et al*: *J Clin Pharmacol 17* 207-213, Apr 1977 **2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **3.** Greenblatt DJ, Allen MD, Shader RI *Clin Pharmacol Ther 21*:355-361, Mar 1977 **4.** Kales A, *et al*: *Clin Pharmacol Ther 18* 356-363, Sep 1975 **5.** Moore JD, Weissman L *J Clin Pharmacol 16*:241-244, May-Jun 1976 **6.** Spiegel HE: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **7.** Robinson DS, Amidon EL Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO New York, Raven Press, 1973, pp 641-646 **8.** Warfarin Study Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ 9. Baldessarini RJ Drugs and the treatment of psychiatric disorders, chap 19, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6 New York, Macmillan Publishing Co Inc., 1980, pp. 391-447 **10.** Cole JO, Davis JM Antidepressant drugs, chap 31 2, in *Comprehensive Textbook of Psychiatry II*, edited by Freedman AM, Kaplan HI, Sadock BJ, ed 2 Baltimore, The Williams & Wilkins Company, vol 2, 1976, pp. 1941-1956 **11.** Douglas WW Histamine and 5-hydroxytryptamine (serotonin) and their antagonists, chap 26, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6, New York, Macmillan Publishing Co Inc., 1980, pp 609-646 **12.** Davis JM, Cole JO, Antipsychotic drugs, chap 31 1, in *Comprehensive Textbook of Psychiatry/II*, edited by Freedman AM, Kaplan HI, Sadock BJ ed 2 Baltimore The Williams & Wilkins Company, vol 2, 1976, pp. 1921-1940

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect.
Adults: 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients*: 15 mg recommended initially until response is determined.

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Cardinal Glennon Memorial Hospital for Children

A Quarter of a Century of Caring for Children

When the doors of Cardinal Glennon Memorial Hospital for Children opened to the first 29 patients on July 5, 1956, the dream of a handful of dedicated people became a reality. At the same time, a total and absolute commitment was made to offer the ultimate in care and advanced treatment to all children. This commitment has been met many times during the past quarter of a century.

Today, Cardinal Glennon Hospital holds the distinction of being one of the five busiest pediatric hospitals in the nation. Annually, some 120,000 children are seen at the hospital, inpatients and outpatients. The hospital's Ambulatory Care Center is the second largest outpatient department in the United States and offers a complete range of services, including the only juvenile rheumatoid arthritis clinic in the St. Louis and surrounding area.

In addition to being an exceptional pediatric health care facility, Cardinal Glennon prides itself on being a teaching hospital with an educational commitment to medical residents, medical and nursing students, pharmacists, respiratory therapists and many other health care professionals. Each year numerous students, eager to learn and broaden their skills, rotate through the hospital.

Through its affiliation with St. Louis University School of Medicine, the hospital houses the School's Department of Pediatrics and Adolescent Medicine. Being located within the St. Louis University Medical Center complex has certain definite advantages, especially in view of the need for cost containment. In several areas, the hospital and the university share services such as cardiac catheterization and CAT scan facilities.

During the past 25 years, many exciting and innovative changes have occurred and many more are in the process of being realized.

Since becoming medical director of Cardinal Glennon Hospital a year and a half ago, Dr. Thomas Aceto, Jr. has strived to fulfill a primary goal he had set — to further develop the hospital into a regional health care center that will provide primary, secondary and tertiary care for children not only in the St. Louis area but also for those in a much wider geographical radius. Toward this goal, he has recruited top researchers, pediatricians and other health care workers to create new patient care programs in such areas as nephrology, immunology, developmental pediatrics and metabolic diseases. Existing programs and departments are being expanded.

At a time when health care budgets are being slashed and medical cutbacks are commonplace, Cardinal Glennon Hospital is making an even stronger commitment to the care of children through its plans for a pediatric research institute. The $5 million research facility will be funded through private donations. It will house 20,000 square feet of laboratory space, classrooms, conference rooms, and a special teaching laboratory and a seminar room.

From its very beginning, Cardinal Glennon Hospital has been involved in research. The history of the hospital includes the operation of the first genetic clinic in Missouri, the first neonatal intensive care unit in the area, pioneering in research in German measles and small pox vaccination, intensive studies of newborn lung and liver problems, pace-setting research and treatment in leukemia and hemophilia, and dramatic advancements in open heart procedures. Most recently, the radiology department was recognized nationally for its success in reducing exposure to children undergoing x-ray examinations. Newly recruited researchers will join forces with eminent scientists who are already engaged in research projects at the hospital to make the pediatric research institute one of the finest in the nation.

Showing a further concern for and commitment to children, Cardinal Glennon Hospital recently established the Knights of Columbus Developmental Center, which fulfills a special health care need. Funded by the Knights of Columbus, this unique multidisciplinary diagnostic center provides diversified services centralized in one area. Using the team approach, the center offers screening in such areas as mental retardation, learning disabilities, developmental disabilities and emotional and behavioral disorders. The cen-

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This article was provided by Thomas Aceto, Jr., M.D., Medical Director; Virginia Peden, M.D., Deputy Medical Director; and Betty J. Jolly, Community Relations Assistant/Media at Cardinal Glennon Memorial Hospital for Children.

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ter also acts as a referral point to other health-related agencies who aid in and complement treatment of children.

As an inner-city hospital, Cardinal Glennon Hospital is faced with some problems that did not exist 25 years ago. Because it is responsive to the needs of the neighborhood as well as to the needs of children and their parents, however, it remains firm in its decision to remain in the city. Cardinal Glennon Hospital is part of the urban renewal of St. Louis through its involvement with the Midtown Medical Center Redevelopment Corporation.

Cardinal Glennon Memorial Hospital for Children has been and continues to be a vibrant symbol of love and caring and of outstanding medical and hospital services founded upon the idea of care of the total child — physically, psychologically and spiritually.

This unique children's hospital — the only comprehensive, totally pediatric health care facility in the nation under Catholic auspices — looks back with pride on its first 25 years of dedicated concern for all children and looks to the future with eager anticipation.

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LETTER to the Editor

To The Editor:

The authors of the article entitled "Results of Surgery for Carcinoma of the Head of the Pancreas: 1960-1980," went to considerable effort to detail and summarize the surgical literature on this subject (December, 1981 issue). Unfortunately, the surgical morbidity was not analyzed and in the experience of Edis and van Heerden from the Mayo Clinic this is still high (46% for a Whipple and 47% for total pancreatectomy).[1]

Given the collectiviely high operative mortality and the poor survival in these patients, it seems reasonable to consider the use of nonoperative techniques, namely, percutaneous aspiration biopsy for confirmation of diagnosis and percutaneous biliary diversion for the relief of jaundice and the associated itching. Thus, *Operative intervention can be avoided* totally, except for the rare occurrence of duodenal obstruction, and these patients may enjoy their remaining days without the benefit of a healing abdominal incision.

As the authors point out, "screening methods for detection of pancreatic cancer at a curable stage have not been developed." With this in mind, we should seek to cause this group of miserable patients as little discomfort as possible.

I am

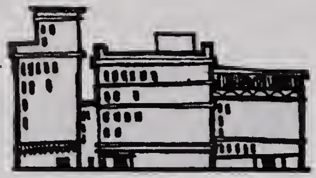
Sincerely yours,
G. David Dixon, M.D.
Department of Radiology
St. Luke's Hospital of Kansas City

Reference #1. Edis, A. J. and van Heerden, J. A.: Ductal Adenocarcinoma of the Pancreas. Mayo Clinic Proc. 55:531, 1980.

Will You Be There?

If you haven't attended the MSMA Auxiliary's annual MSMF/AMA-ERF Benefit Auction at the Annual Session, this is the year to do so. Exciting items are coming in and your donation will be appreciated. Please notify Mrs. A. J. Campbell, 1500 West 16th, Sedalia 65301 or bring your donation to the Regency Atlanta A Room between 9 AM and 3 PM on Thursday, April 1. This is a fun event that benefits our medical students and schools.

Are the results of $100 million worth of government-funded research on hypertension worth reading about?



NEWS

From the Medical Schools

UNIVERSITY OF MISSOURI-KANSAS CITY

Dean Harry S. Jonas has announced the establishment of the first annual Carl Migliazzo Memorial Lectureship to be held in conjunction with commencement activities at the School of Medicine.

The lectureship has been established to honor the memory of Mr. Migliazzo, who was an original incorporator of Truman Medical Center, the primary affiliated adult teaching hospital for the School. Mr. Migliazzo served as president of the Truman Medical Center Board of Directors until resigning three weeks before his death last May.

"Carl Migliazzo spent endless hours convincing state officials of the importance of creating a medical school in Kansas City," Dean Jonas said. "His dedication and hard work will leave a lasting imprint on this institution and the Kansas City community."

Susan Blanchard, a fourth-year medical student, has received a $1,000 scholarship award for academic achievement from the Philippine Medical Association Scholarship Group, Inc.

Sarah Alderman, also a fourth-year student, received $500 from the St. Louis Friends of the UMKC School of Medicine for academic achievement.

Theodore Beringer, Ph.D., associate professor of anatomy, has received $12,500 from the Gustavus and Louise Pfeiffer Research Foundation for support of his research study, "Vasospasm in Isolated Perfused Arterioles."

Edwin F. Rosinski, Ph.D., professor in the Office of Medical Education at the University of California-San Francisco School of Medicine, will be at the UMKC School of Medicine as a visiting docent for two days next month. On March 4 and 5, Dr. Rosinski will speak on "Current Developments in Medical Schools" and "Measures of Success in a Medical School."

During his stay, Dr. Rosinski also will review the progress of the School in its development of the Quarterly Profile Examination and the role of National Board examinations in medical schools.

M. G. Hanna, Jr., Ph.D., director of The Frederick Cancer Research Center in Frederick, Md., also will visit the School of Medicine the first week in March. Dr. Hanna will serve as a consultant in the School of Medicine's development of community-wide efforts in oncology: research, teaching, and service.

UNIVERSITY OF MISSOURI-COLUMBIA

Thomas W. Burns, professor of medicine, has been nominated for election to the Board of Regents of the American College of Physicians.

The 16-member Board of Regents is the policymaking body for the organization, which includes physicians in the U.S., Canada, Mexico and Latin America.

Dr. Burns has been a member of the University faculty since 1955 and is director of the Department of Medicine's endocrinology and metabolism division. He previously served on the Board of Governors of the American College of Physicians, representing the Missouri region from 1975-1979. His term as Regent is expected to be confirmed and begin at the ACP's 63rd Annual Session meeting in April and run through 1985.

Dr. Walid O. Shekim and *Dr. Syed Arshad Husain*, associate professors of psychiatry, participated in the annual meeting of the American Academy of Child Psychiatry held recently in Dallas, Tex.

Dr. Shekim presented a paper on "Platelet MAO in Boys with Attention Deficit Disorder and Hyperactivity." The paper was co-authored by *Dr. L. G. Davis, Dr. D. B. Bylund, Dr. E. Brunngraber* and *Ellen Horwitz*.

Dr. Husain served as co-chairman of a workshop on consultation and liaison services in child psychiatry. He also was appointed to the Academy's Committee on Training.

Following the meeting in Dallas, Dr. Husain presented a paper on "Incidence of Sexual Abuse in Hospitalized Girls" at the World Psychiatric Congress in New York City.

The *Anheuser-Busch Charitable Trust* has announced a $100,000 gift to the proposed Health Sciences Library. The gift brings to more than $2 million the amount raised from private donations for the facility, which will also house books from other campus libraries. It is anticipated the building will house some 135,000 volumes, reducing overcrowding elsewhere.

Cosmopolitan International has raised more than $250,000 toward construction of a Cosmopolitan International-UMC Diabetes Center. The proposed building would be erected next to the new UMC Eye Institute. Cosmopolitan International expects to raise $640,000 for the center.

The University of Missouri-Columbia Hospital and Clinics have been officially designated a Level I Trauma Center. The facility is one of only four Level I centers in the state and the only one not in a major metropolitan area. Level I centers provide full trauma treatment 24 hours a day.

Dr. Carl H. Ide, professor of ophthalmology, presented a paper at the annual meeting of the American Academy of Ophthalmology held in Atlanta in November. The paper entitled "Prevalence of Retinopathy In Young Diabetics: Relation to Blood Glucose Control by Multiple Insulin Injections" presented a discussion on findings to date of the study currently underway with *Dr. David Goldstein* of Child Health as principal investigator.

The presentation was recognized in the medical news section of the December 18 issue of the *Journal of the American Medical Association*.

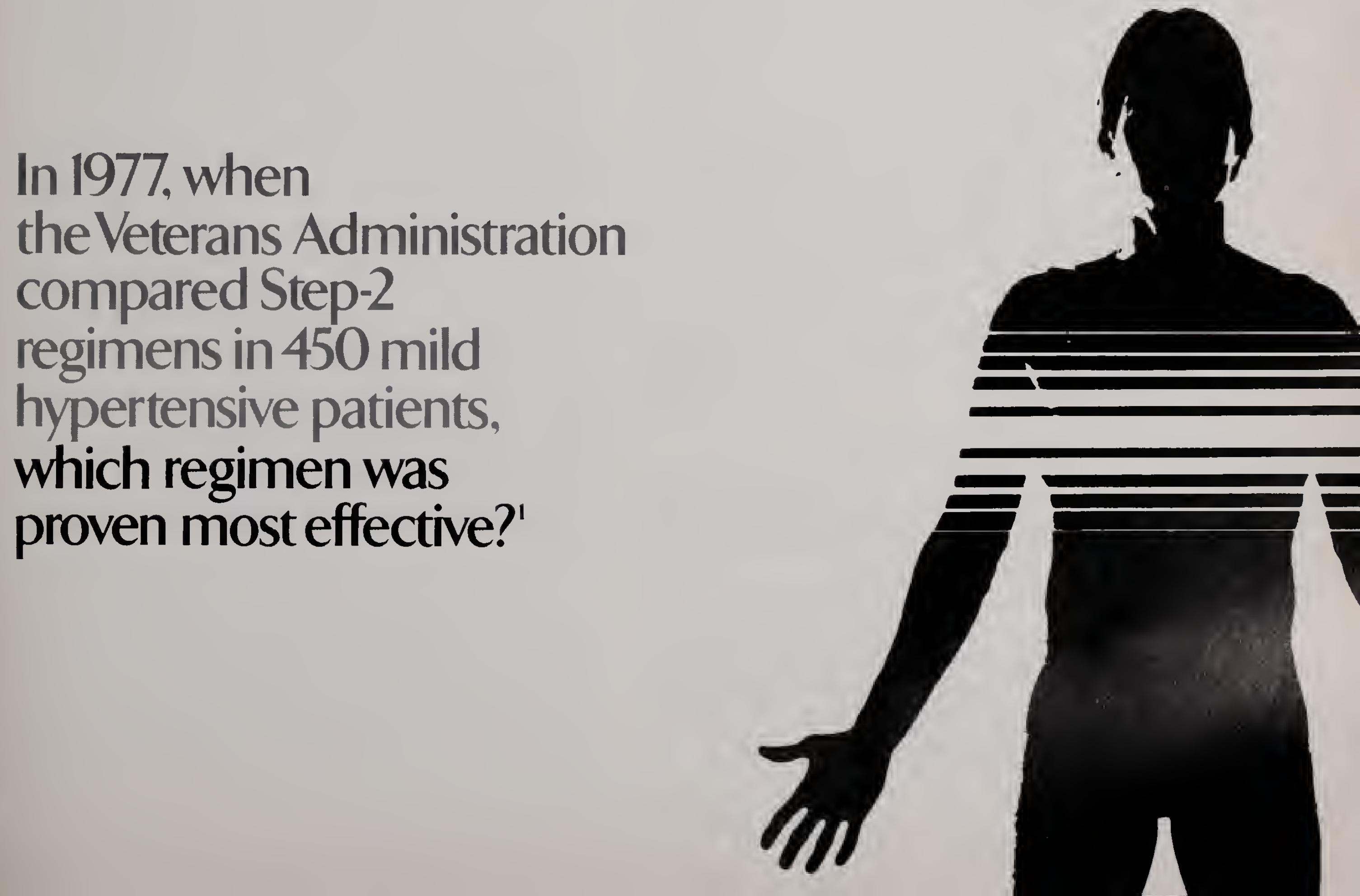
ST. LOUIS UNIVERSITY

Maurice Green, Ph.D., professor and chairman of the Institute for Molecular Virology at the Medical Center, was awarded a one-year, $56,881 grant from The Council for Tobacco Research-U.S.A., Inc.

Dr. Green will study the human adenoviruses that cause upper respiratory disease in man and are present in 70% to 80% of normal human tonsils and adenoids. Adenoviruses have been found to contain transforming genes which change cells in a test tube to malignant or cancerous states through the formation of "transforming proteins."

Karl Brackmann, Dr. Green's research associate, has developed a procedure to insert cloned adenovirus transforming genes into bacteria and into human cells using recombinant DNA techniques. It is hoped that this procedure will produce large quantities of adenovirus transforming proteins for further study. By understanding how these viral transforming proteins alter cell growth, it is anticipated that measures to control cancer can be developed.

Established in 1964, the Institute for Molecular Virology is an internationally renowned center for biomedical scientists dedicated to research on cancer and tumor virology. Scientists focus on the



molecular basis of cancer cell growth and investigate the possible role of viruses in human cancer.

Dr. Green joined the Department of Microbiology at the School of Medicine in 1956 and in 1964 was named director of the institute.

Amir Ron, M.D., has been appointed instructor in psychiatry. Dr. Ron will work closely with *George T. Grossberg*, M.D., director of the gero-psychiatry program at David P. Wohl Memorial Mental Health Hospital at St. Louis University Medical Center. His primary responsibilities will include consultations and management of inpatients. In addition, he will be involved in training medical students and residents in gero-psychiatry.

Dr. Ron received his M.D. degree at the Hebrew University in Jerusalem. He took his residency at Washington University School of Medicine and plans to pursue research on the biological aspects of psychological medicine.

William E. Allen Jr., M.D., 78, clinical professor of radiation oncology at St. Louis University School of Medicine died on December 31, 1981 at St. Mary's Health Center, St. Louis. He died of cancer.

In 1935, Dr. Allen became the first black to be certified by the American Board of Radiology, just two years after he had organized the first approved American training school for black x-ray technicians. The school was at St. Mary's Infirmary in St. Louis.

Dr. Allen was also the first black radiologist to receive a Gold Medal from the American College of Radiology. Awarded in 1974, the award is in recognition of distinguished and extraordinary service to the American College of Radiology, which has awarded about one per year since 1927.

Dr. Allen received his B.S. and M.D. degrees from Howard University in Washington, D.C. He completed his internship and residency at Homer G. Phillips Hospital in St. Louis in 1935. He had been with St. Louis University Medical Center since 1966.

WASHINGTON UNIVERSITY

Dr. Thomas A. Woolsey, a School of Medicine researcher, is one of 14 recipients of the newly established McKnight Neuroscience Development Awards for $100,000 each.

Dr. Woolsey is an associate professor in the Department of Anatomy and Neurobiology and the Department of Physiology and Biophysics at Washington University. He is also coordinator of the Neurosciences Program in the Division of Biology and Biomedical Sciences.

Dr. Woolsey will use the award to continue his "Immunocytochemical Studies of Mouse Barrel Cortex" in an attempt to characterize nerve cells on a basis of their biochemical properties.

The McKnight Foundation initiated the awards to advance research in neuroscience, especially as it pertains to memory and ultimately a clearer understanding of disorders affecting memory and its biological substrates. The awards will support investigative programs of neuroscientists with outstanding promise.

A graduate of Johns Hopkins School of Medicine in 1969, Dr. Woolsey interned at Barnes Hospital. In 1970, he joined Washington University as a postdoctoral fellow in the Department of Anatomy. His honors include the Franklin Paine Mall Prize in Anatomy, the Henry Strong Denison Scholarship and the sixth Clinton N. Woolsey Lecture in Neuroscience. He has published more than 60 articles.

Another School of Medicine researcher has been awarded a $341,000 grant from the National Institutes of Health to continue his studies on steroid hormone interaction with specific proteins from the reproductive system. The grant, to be used over a four-year period, was awarded to *Frederick Sweet*, Ph.D., associate professor of reproductive biology in the Department of Obstetrics and Gynecology.

Dr. Sweet will use the funds to continue work begun at the medical school two years ago with *Colin Nancarrow*, Ph.D., senior research scientist from the governmental Animal Production Division of CSIRO, Blacktown, Australia, and *Mohamed Sharaf*, Ph.D., who is now an assistant professor at the University of Alexandria, Egypt.

The Salmon Committee on Psychiatry and Mental Hygiene Medal was presented to *Eli Robins*, M.D., at the committee's 50th annual meeting in New York. Dr. Robins received the award for his distinguished service to the field of psychiatry and his knowledge of mental disorders. He is the 36th recipient of this prestigious honor awarded in the field of psychiatry.

Dr. Robins is the Wallace Renard Professor in the Department of Psychiatry. He also is a psychiatrist with Barnes, Jewish and Children's hospitals.

A 1943 graduate of Harvard Medical School, Dr. Robins interned at Mount Sinai Hospital in New York, and served his residency in psychiatry at Massachusetts General Hospital in Boston and McLean Hospital in Waverly, Mass. and his residency in neurology at the Pratt Diagnostic Hospital in Boston. He has been a member of the faculty of Washington University School of Medicine since 1949 and served as head of the Department of Psychiatry for 13 years.

Dr. Robins is internationally recognized for his research on suicides. His honors include the Gold Medal Award by the Society of Biological Psychiatry in 1974, the Heinrich Waelsch Lectureship by Columbia University in 1976 and the Paul H. Hoch Award by the American Psychopathological Association in 1977.

Philip M. Majerus, M.D., professor in the departments of medicine and biological chemistry and a physician at Barnes Hospital, received the most prestigious award presented by the American Society of Hematology recently at the society's 24th annual meeting in San Antonio, Tex.

Internationally recognized for his research on low-dose aspirin in the prevention of thrombosis, Dr. Majerus received the prize for his contributions to the understanding of blood coagulation and the functions of blood platelets.

A 1961 magna cum laude graduate of Washington University School of Medicine, Dr. Majerus served his internship and residency at Massachusetts General Hospital in Boston. He then was a research associated at the National Heart Institute in Bethesda, Md., a position he maintained until he became a member of the Washington University faculty in 1966.

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New Members

Linda E. Ansbacher, M.D., Dept. of Pathology, University of Missouri Hospital and Clinic, Columbia 65201, has become a member of Boone County Medical Society. Dr. Ansbacher is a native of Springfield, received her preliminary education at Southwest Missouri State University and her M.D. degree at the University of Kansas in 1975. She specializes in pathology.

Robert J. Baglan, M.D., 4511 Forest Park Parkway, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Baglan is a native of Carrollton, Ky., received his preliminary education at the University of California and his M.D. degree at Washington University in 1976. He specializes in therapeutic radiology.

Sarwath Bhattacharya, M.D., 9903 Gravois, Afton 63123, has become a member of St. Louis Metropolitan Medical Society. Dr. Bhattacharya is a native of India, received her preliminary education at Marathwada University and her M.D. degree at Nagpur University in 1965. She specializes in internal medicine.

Gerold N. Borodach, M.D., 6941 Washington Ave., St. Louis 63130, has become a member of St. Louis Metropolitan Medical Society. Dr. Borodach is a native of Willimantic, Conn., received his preliminary education at Brown University and his M.D. degree at Tufts University in 1959. He specializes in anesthesiology.

Stephen A. Brunton, M.D., 1740 W. 92nd, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Brunton is a native of Australia, received his preliminary education at Monash University and his M.D. degree at Monash University in 1974. He specializes in family practice.

Richard P. Charette, M.D., Prime Health, 9150 E. 41st Terr., Kansas City 64133, has become a member of Jackson County Medical Society. Dr. Charette is a native of Schenectady, N.Y., received his preliminary education at Gonzaga University and his M.D. degree at the University of Kansas in 1976. He specializes in pediatrics.

(Continued on next page)

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

V. C. Babu Chittuluru, M.D., 9705 Watson Rd., St. Louis 63126, has become a member of St. Louis Metropolitan Medical Society. Dr. Chittuluru is a native of India, received his preliminary education at Guntur College and his M.D. degree at Guntur College in 1973. He specializes in internal medicine.

Michael L. Craighead, M.D., 915A Leslie Blvd., Jefferson City 65101, has become a member of Cole County Medical Society. Dr. Craighead is a native of Fulton, received his preliminary education at Westminster College and his M.D. degree at Vanderbilt University in 1975. He specializes in general surgery.

Larry D. Deffenbaugh, D.O., 2700 McClelland Blvd., Joplin 64801, has become a member of Jasper County Medical Society. Dr. Deffenbaugh is a native of Missouri, received his preliminary education at Lincoln University and his D.O. degree at Kansas City College of Osteopathic Medicine in 1974. He specializes in gastroenterology and internal medicine.

William L. Driehorst, M.D., University of Missouri-Kansas City, Internal Medicine Residency Program, 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Driehorst is a native of Columbus, Ohio, received his preliminary education at Ohio State University and his M.D. degree at Case Western Reserve University in 1981. He specializes in internal medicine.

Mary Patricia Forkin, M.D., 653 S. New Ballas Rd., Apt. 3D, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Forkin is a native of Springfield, Ill., received her preliminary education at the University of Illinois and her M.D. degree at Southern Illinois University in 1980. She specializes in family practice.

A. Daniel Glassman, M.D., 950 Francis Pl., St. Louis 63105, has become a member of St. Louis Metropolitan Medical Society. Dr. Glassman is a native of Cincinnati, Ohio, received his preliminary education at University of Cincinnati and his M.D. degree at the University of Cincinnati in 1976. He specializes in internal medicine.

Virginia Maureen Herrmann, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Herrmann is a native of Cleveland, Ohio, received her preliminary education at St. Louis University and her M.D. degree at St. Louis

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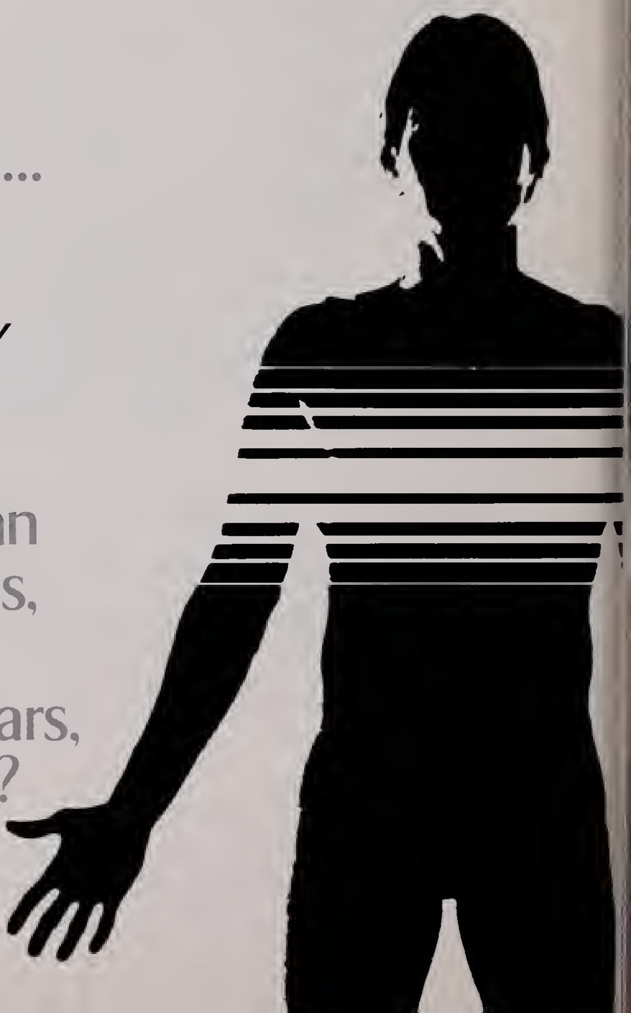

University in 1974. She specializes in general surgery.

John P. Hess, M.D., 1035 Bellevue, Suite 313, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Hess is a native of Elmhurst, Ill., received his preliminary education at the University of Notre Dame and his M.D. degree at Tulane University in 1974. He specializes in internal medicine and cardiology.

Kenneth A. Hodel, M.D., 621 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Hodel is a native of Watseka, Ill., received his preliminary education at Illinois State University and his M.D. degree at the University of Illinois in 1976. He specializes in obstetrics and gynecology.

Leanna M. Hoffman, M.D., 2216 Sunflower, Columbia 65201, has become a member of Boone County Medical Society. Dr. Hoffman is a native of Havre De Grace, Md., received her preliminary education at Greenville College and her M.D. degree at Baylor College in 1976. She specializes in internal medicine.

Richard J. Iken, M.D., 10004 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Iken is a native of St. Louis, received his preliminary education at the University of Wisconsin-Madison and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in pediatrics.

James A. Junker, M.D., 510 S. Kingshighway Blvd., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Junker is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1979. He specializes in diagnostic radiology.

Richard L. Mackey, M.D., 10007 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Mackey is a native of Tulsa, Okla., received his preliminary education at Washington University and his M.D. degree at Tulane Medical School in 1963. He specializes in urology.

Dennis G. Motchan, M.D., 3394 McKelvey Rd., Bridgeton 63044, has become a member of

And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

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St. Louis Metropolitan Medical Society. Dr. Motchan is a native of St. Louis, received his preliminary education at Northwestern University and his M.D. degree at Northwestern University in 1974. He specializes in internal medicine.

Tuyen M. Nguyen, M.D., 211 Teaco Rd., Kennett 63857, has become a member of Dunklin County Medical Society. Dr. Nguyen is a native of Vietnam, received his preliminary education at the Faculty of Sciences-Saigon and his M.D. degree at the Faculty of Medicine-Saigon in 1968. He specializes in general surgery.

David A. Oliver, M.D., 1041 Manchester Rd., Ellisville 63011, has become a member of St. Louis Metropolitan Medical Society. Dr. Oliver is a native of Martin, Tenn., received his preliminary education at the University of Tennessee and his M.D. degree at the University of Tennessee in 1970. He specializes in internal medicine.

Tapankumar S. Roy, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Roy is a native of India, received his preliminary education at Majaraja Sayajirao University and his M.D. degree at Baroda Medical College in 1974. He specializes in therapeutic radiology.

Douglas A. Sakmar, M.D., 4211 Bayless Ave., St. Louis 63123, has become a member of St. Louis Metropolitan Medical Society. Dr. Sakmar is a native of Cleveland, Ohio, received his preliminary education at John Carroll University and his M.D. degree at St. Louis University in 1971. He specializes in pediatrics.

James S. Scherer, M.D., Suit T-101, 6420 Prospect Ave., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Scherer is a native of Sikeston, received his preliminary education at Southeast Missouri State University and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in internal medicine.

Alfred D. Shaplin, M.D., 1034 S. Brentwood, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Shaplin is a native of Boston, Mass., received his preliminary education at Washington University and his M.D. degree at St. Louis University in 1976. He specializes in diagnostic radiology.

Alberto Saurez, M.D., 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Suarez is a native of Laredo, Tex., received his preliminary education at the American School Foundation

Salutensin® Salutensin-Demi™

(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

and his M.D. degree at Universidad de Monterrey in 1978. He specializes in family practice.

Ashalatha R. Tatineni, M.D., 6150 Oakland Ave., St. Louis 63139, has become a member of St. Louis Metropolitan Medical Society. Dr. Tatineni is a native of India, received her preliminary education at Kurnool College and her M.D. degree at Osmania Medical College in 1972. She specializes in internal medicine.

James D. Wilkinson, M.D., 373 W. 101st Terr., Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Wilkinson is a native of Painesville, Ohio, received his preliminary education at the University of South Florida and his M.D. degree at the University of South Florida in 1978. He specializes in pediatrics.

Paul H. Young, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Young is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in neurological surgery.

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Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

SUPPLIED

Bottles of 100 and 1000 scored 50 mg. tablets.

References:
1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 /TWX 910-221-0300

"PHYSICIANS HAVE ACTED responsibly in their fee-setting practices during a period of unprecedented inflation," AMA Executive Vice-President James H. Sammons, M.D., told the House Commerce Subcommittee on health at a hearing on the cost of medical care. "As inflation moderates, we fully expect the medical care sector to be able to achieve reductions in the rate of growth of health care costs," he said. Dr. Sammons reviewed AMA activities aimed at cost containment, citing sponsorship of the National Commission on the Cost of Medical Care, participation in the Voluntary Effort, establishment of the Federation Cost Effectiveness Communications Network, cosponsorship of a national Conference on Utilization of Health Services scheduled for next March, and development of coalitions for health care.

A STATEMENT BY SIX national organizations encouraging the development of health care coalitions was endorsed by the AMA House of Delegates at the 1981 Interim Meeting. In endorsing the statement, the House said "the AMA strongly supports health care coalitions that include meaningful physician participation, so that primary emphasis is given to quality medical care, including availability and access, as well as recognizing the importance of cost effectiveness and cost containment." Signing the statement, which calls for members or affiliates to work together in voluntary coalitions on a local, state or regional basis, were the AMA, American Hospital Association, Blue Cross and Blue Shield Associations, Business Roundtable, Health Insurance Association of America, and American Federation of Labor and Congress of Industrial Organizations.

CALLING FOR CONTINUED strong private-sector leadership in efforts to contain health care costs, President Daniel T. Cloud, M.D., urged the AMA to undertake new approaches that will control the demand for care without sacrificing quality of availability. As approaches, he cited alternatives to hospitalization, expansion of the consumer choice philosophy and "prevention through improved patterns of living." Dr. Cloud asked the AMA to promote a long-range national policy for testing all cost-containment proposals. This policy, he said, should stress that cost containment must not adversely affect quality and availability and that control of demand is the most effective way to control costs.

THE NEW AMA OFFICE building in Washington, D.C., will be 90% occupied when it is dedicated on April 6. The AMA Washington Office, which will occupy two floors of the 12-story building at 1101 Vermont Ave., N.W., is scheduled to move in on March 1. Medical, scientific, and commercial organizations will lease office space on the other ten floors. First occupant of the building — on December 21 — was the American Society of Internal Medicine. Other members of the AMA Federation planning to open offices in the building are American Academy of Ophthalmology, American Council of Otolaryngology and College of American Pathologists. The American Association for the Advancement of Science also will have an office in the building.

THE APPLICATIONS of six medical specialty societies for representations in the House of Delegates were approved at the Interim Meeting. The six newly seated societies are American Association of Clinical Urologists, American College of Nuclear Physicians, American Orthopaedic, American Society of Gastrointestinal Endoscopy, American Society of Therapeutic Radiologists, and Association of Life Insurance Medical Directors of America. Sixty-one national specialty societies are not represented in the AMA House.

FOUR STUDENT RESEARCH forums will be funded and cosponsored in 1982 by the AMA Education and Research Foundation. The AMA-ERF Board of Directors granted $46,000 to the University of Texas Medical Branch in Galveston to finance three regional forums and a national forum designed to encourage medical research among students. The national forum will be at the University of Texas Medical Branch in Galveston on April 28-30. The regional forums will be in Carmel, Calif., Feb. 4-6; University of Miami School of Medicine, Feb. 8-10; and University of Illinois Medical Center, Chicago, March 25-26.

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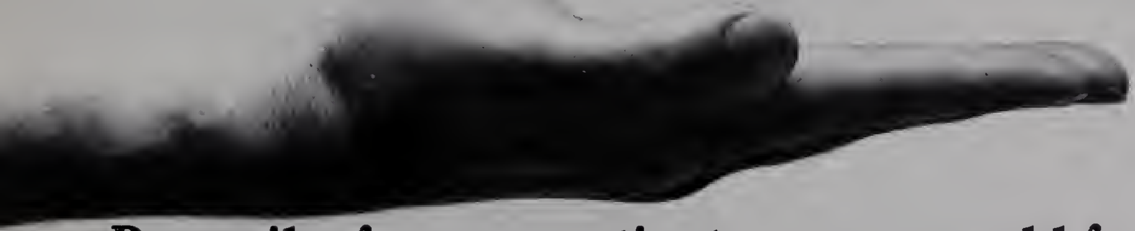

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(ibuprofen)

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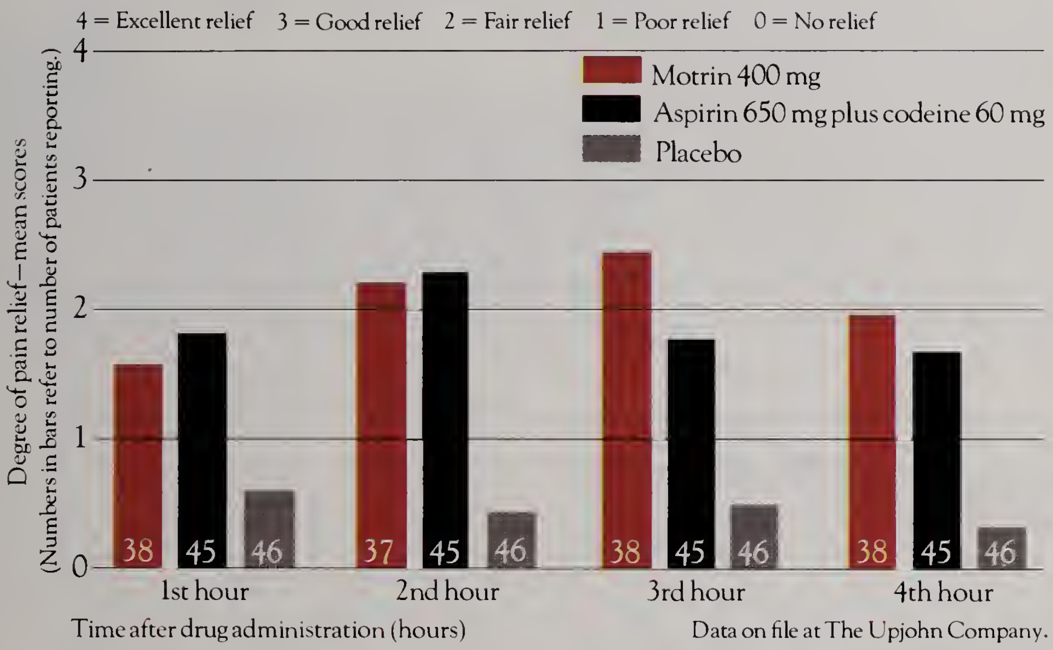
compare the analgesic effect

A *Motrin* 400 mg dose relieved postsurgical dental pain as effectively as a combination of 650 mg aspirin and 60 mg codeine (two aspirin-with-codeine No. 3 tablets) in a study of 129 patients. In this double-blind, placebo-controlled, randomized study, no statistically significant difference in relief of pain was noted at 1, 2, and 4 hours between the *Motrin* and aspirin-with-codeine groups… with *Motrin* being significantly more effective ($p = 0.03$) at the three-hour interval. Active treatment was significantly more effective ($p < 0.0001$) than placebo at all time intervals.

Comparison of pain relief
Motrin vs aspirin-codeine combination



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One tablet q4-6h prn
For relief of mild to moderate pain:

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• Not a narcotic • Not addictive • Not habit forming • Nonscheduled • Acts peripherally • Relieves pain rapidly • Relieves inflammation • Indicated in acute and chronic pain • Well tolerated (The most common side effect with *Motrin* is mild gastrointestinal disturbance.)

Please turn the page for a brief summary of prescribing information.

Upjohn

Motrin® (ibuprofen) now proved an effective analgesic for mild to moderate pain

Motrin® Tablets (ibuprofen, Upjohn)

Indications and Usage: Relief of mild to moderate pain

Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* Used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy nor by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400, or 600 mg t.i.d. or q.i.d.
Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

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MARCH 1981

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31 million Americans have it. There are almost a million new cases a year. And six out of ten are under 60. Symptoms can come and go for years. So if you don't know the warning signals, find out. If you'd like information that could help you—or you'd like to help us—write to the Arthritis Foundation, Box 19000, Atlanta, GA 30326.

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FOUNDATION

Bactrim™
(trimethoprim and sulfamethoxazole)
succeeds

Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

Expanding its usefulness in antimicrobial therapy

in recurrent UTI...
a continuing record of high clinical effectiveness against common uropathogens

in acute otitis media in children...
effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults...
clears the sputum and lowers its volume...on *b.i.d.* dosage

in shigellosis...
faster relief of diarrhea than with ampicillin[2]

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae.* To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus, infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended, therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

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Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry-flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension,* containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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DOUBLE STRENGTH TABLETS

Bactrim continues to demonstrate high clinical effectiveness in recurrent urinary tract infections. Bactrim reaches effective levels in urine, serum, and renal tissue[1] ...the trimethoprim component diffuses into vaginal secretions in bactericidal concentrations[1]... and in the fecal flora, Bactrim effectively suppresses Enterobacteriaceae[1,2] with little resulting emergence of resistant organisms.

1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

maximizes results with B.I.D. convenience

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* due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

STACKS

79—3

Missouri Medicine

Vol. 79, No. 3 (ISSN 0026-6620) March, 1982

Zollinger-Ellison Syndrome

Diagnosis and Treatment

Removal of Bilateral Pheochromocytomas Using Isoflurane Anesthesia

Editor's Corner

All in a Day's Work

Treatment of Rectal Carcinoma in Intracavitary Irradiation

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Missouri State Medical Association

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Debra K. Udey
Claim Representative

Edgar R. Smith
Regional Claim Representative

Lawrence W. Ferguson
Claims Director
Patient Safety Coordinator

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Pfizer Laboratories
Announces

THE FIRST ORAL
CALCIUM CHANNEL
BLOCKER
FOR THE
MANAGEMENT OF
ANGINA PECTORIS

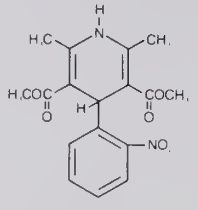
NEW
PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

Please see PROCARDIA® *prescribing information on next page.*

PROCARDIA® CAPSULES
For Oral Use

nifedipine

DESCRIPTION: PROCARDIA (nifedipine) is an antianginal drug belonging to a new class of pharmacological agents, the calcium channel blockers. Nifedipine is 3,5-pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, dimethyl ester, $C_{17}H_{18}N_2O_6$, and has the structural formula:



Nifedipine is a yellow crystalline substance, practically insoluble in water but soluble in ethanol. It has a molecular weight of 346.3. PROCARDIA CAPSULES are formulated as soft gelatin capsules for oral administration each containing 10 mg nifedipine.

CLINICAL PHARMACOLOGY: PROCARDIA (nifedipine) is a calcium ion influx inhibitor (slow channel blocker or calcium ion antagonist) and inhibits the transmembrane influx of calcium ions into cardiac muscle and smooth muscle. The contractile processes of cardiac muscle and vascular smooth muscle are dependent upon the movement of extracellular calcium ions into these cells through specific ion channels. PROCARDIA selectively inhibits calcium ion influx across the cell membrane of cardiac muscle and vascular smooth muscle without changing serum calcium concentrations.

Mechanism of Action: The precise means by which this inhibition relieves angina has not been fully determined, but includes at least the following two mechanisms:

1) Relaxation and prevention of coronary artery spasm: PROCARDIA dilates the main coronary arteries and coronary arterioles, both in normal and ischemic regions, and is a potent inhibitor of coronary artery spasm, whether spontaneous or ergonovine-induced. This property increases myocardial oxygen delivery in patients with coronary artery spasm, and is responsible for the effectiveness of PROCARDIA in vasospastic (Prinzmetal's or variant) angina. Whether this effect plays any role in classical angina is not clear, but studies of exercise tolerance have not shown an increase in the maximum exercise rate-pressure product, a widely accepted measure of oxygen utilization. This suggests that, in general, relief of spasm or dilation of coronary arteries is not an important factor in classical angina.

2) Reduction of oxygen utilization: PROCARDIA regularly reduces arterial pressure at rest and at a given level of exercise by dilating peripheral arterioles and reducing the total peripheral resistance (afterload) against which the heart works. This unloading of the heart reduces myocardial energy consumption and oxygen requirements and probably accounts for the effectiveness of PROCARDIA in chronic stable angina.

Pharmacokinetics and Metabolism: PROCARDIA is rapidly and fully absorbed after oral administration. The drug is detectable in serum 10 minutes after oral administration, and peak blood levels occur in approximately 30 minutes. It is highly bound by serum proteins. PROCARDIA is extensively converted to inactive metabolites and approximately 80% of PROCARDIA and metabolites are eliminated via the kidneys. The half-life of nifedipine in plasma is approximately two hours. There is no information on the effects of renal or hepatic impairment on excretion or metabolism of PROCARDIA.

Hemodynamics: Like other slow channel blockers, PROCARDIA exerts a negative inotropic effect on isolated myocardial tissue. This is rarely, if ever, seen in intact animals or man, probably because of reflex responses to its vasodilating effects. In man, PROCARDIA causes decreased peripheral vascular resistance and a fall in systolic and diastolic pressure, usually modest (5–10 mm Hg systolic), but sometimes larger. There is usually a small increase in heart rate, a reflex response to vasodilation. Measurements of cardiac function in patients with normal ventricular function have generally found a small increase in cardiac index without major effects on ejection fraction, left ventricular end diastolic pressure (LVEDP) or volume (LVEDV). In patients with impaired ventricular function, most acute studies have shown some increase in ejection fraction and reduction in left ventricular filling pressure.

Electrophysiologic Effects: Although, like other members of its class, PROCARDIA decreases sinoatrial node function and atrioventricular conduction in isolated myocardial preparations, such effects have not been seen in studies in intact animals or in man. In formal electrophysiologic studies, predominantly in patients with normal conduction systems, PROCARDIA has had no tendency to prolong atrioventricular conduction, prolong sinus node recovery time, or slow sinus rate.

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta-blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Increased Angina/Beta Blocker Withdrawal: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients usually receiving a beta blocker have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event, as the unloading effect of PROCARDIA would be expected to be of less benefit to these patients, owing to their fixed impedance to flow across the aortic valve.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. See Warnings.

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: See Indications and Warnings. Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Carcinogenesis, mutagenesis, impairment of fertility: Nifedipine was administered orally to rats for two years and was not shown to be carcinogenic. When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose. *In vivo* mutagenicity studies were negative.

Pregnancy: Pregnancy category C. Nifedipine has been shown to be teratogenic in rats when given in doses 30 times the maximum recommended human dose. Nifedipine was embryotoxic (increased fetal resorptions, decreased fetal weight, increased stunted forms, increased fetal deaths, decreased neonatal survival) in rats, mice and rabbits at doses of from 3 to 10 times the maximum recommended human dose. In pregnant monkeys, doses 2/3 and twice the maximum recommended human dose resulted in small placentas and underdeveloped chorionic villi. In rats, doses three times the maximum human dose and higher caused prolongation of pregnancy. There are no adequate and well-controlled studies in pregnant women. PROCARDIA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

ADVERSE REACTIONS: In multiple-dose U.S. and foreign-controlled studies in which adverse reactions were reported spontaneously, adverse effects were frequent but generally not serious and rarely required discontinuation of therapy or dosage adjustment. Most were expected consequences of the vasodilator effects of PROCARDIA.

Adverse Effect	PROCARDIA (%) (N = 226)	Placebo (%) (N = 235)
Dizziness, light-headedness, giddiness	27	15
Flushing, heat sensation	25	8
Headache	23	20
Weakness	12	10
Nausea, heartburn	11	8
Muscle cramps, tremor	8	3
Peripheral edema	7	1
Nervousness, mood changes	7	4
Palpitation	7	5
Dyspnea, cough, wheezing	6	3
Nasal congestion, sore throat	6	8

There is also a large uncontrolled experience in over 2100 patients in the United States. Most of the patients had vasospastic or resistant angina pectoris, and about half had concomitant treatment with beta-adrenergic blocking agents. The most common adverse events were the same ones seen in the controlled trials, with dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

Several of these side effects appear to be dose related. Peripheral edema occurred in about one in 25 patients at doses less than 60 mg per day and in about one patient in eight at 120 mg per day or more. Transient hypotension, generally of mild to moderate severity and seldom requiring discontinuation of therapy, occurred in one of 50 patients at less than 60 mg per day and in one of 20 patients at 120 mg per day or more.

In addition, 2% or fewer of patients reported the following: **Respiratory:** Nasal and chest congestion, shortness of breath. **Gastrointestinal:** Diarrhea, constipation, cramps, flatulence. **Musculoskeletal:** Inflammation, joint stiffness, muscle cramps. **CNS:** Shakiness, nervousness, jitteriness, sleep disturbances, blurred vision, difficulties in balance. **Other:** Dermatitis, pruritus, urticaria, fever, sweating, chills, sexual difficulties.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

In a subgroup of over 1000 patients receiving PROCARDIA with concomitant beta blocker therapy, the pattern and incidence of adverse experiences was not different from that of the entire group of PROCARDIA treated patients (see **Precautions**).

In a subgroup of patients with a diagnosis of congestive heart failure as well as angina, dizziness or light-headedness, peripheral edema, headache or flushing each occurred in one in eight patients. Hypotension occurred in about one in 20 patients. Syncope occurred in approximately one patient in 250. Myocardial infarction or symptoms of congestive heart failure each occurred in about one patient in 15. Atrial or ventricular dysrhythmias each occurred in about one patient in 150.

Laboratory tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have already been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

OVERDOSAGE: Although there is no well documented experience with PROCARDIA overdosage, available data suggest that gross overdosage could result in excessive peripheral vasodilation with subsequent marked and probably prolonged systemic hypotension. Clinically significant hypotension due to PROCARDIA overdosage calls for active cardiovascular support including monitoring of cardiac and respiratory function, elevation of extremities, and attention to circulating fluid volume and urine output. A vasoconstrictor (such as norepinephrine) may be helpful in restoring vascular tone and blood pressure, provided that there is no contraindication to its use. Clearance of PROCARDIA would be expected to be prolonged in patients with impaired liver function. Since PROCARDIA is highly protein-bound, dialysis is not likely to be of benefit.

DOSAGE AND ADMINISTRATION: The dosage of PROCARDIA needed to suppress angina and that can be tolerated by the patient must be established by titration. Excessive doses can result in hypotension.

The starting dose is one 10 mg capsule, swallowed whole, 3 times/day. The usual effective dose range is 10–20 mg three times daily. Some patients, especially those with evidence of coronary artery spasm, respond only to higher doses, more frequent administration, or both. In such patients, doses of 20–30 mg three or four times daily may be effective. Doses above 120 mg daily are rarely necessary. More than 180 mg per day is not recommended.

In most cases, PROCARDIA titration should proceed over a 7–14 day period so that the physician can assess the response to each dose level and monitor the blood pressure before proceeding to higher doses.

If symptoms so warrant, titration may proceed more rapidly provided that the patient is assessed frequently. Based on the patient's physical activity level, attack frequency, and sublingual nitroglycerin consumption, the dose of PROCARDIA may be increased from 10 mg t.i.d. to 20 mg t.i.d. and then to 30 mg t.i.d. over a three-day period.

In hospitalized patients under close observation, the dose may be increased in 10 mg increments over four to six-hour periods as required to control pain and arrhythmias due to ischemia. A single dose should rarely exceed 30 mg.

No "rebound effect" has been observed upon discontinuation of PROCARDIA. However, if discontinuation of PROCARDIA is necessary, sound clinical practice suggests that the dosage should be decreased gradually with close physician supervision.

Co-Administration with Other Antianginal Drugs: Sublingual nitroglycerin may be taken as required for the control of acute manifestations of angina, particularly during PROCARDIA titration. See **Precautions, Drug Interactions** for information on co-administration of PROCARDIA with beta blockers or long-acting nitrates.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA Capsule contains 10 mg of nifedipine. PROCARDIA Capsules are supplied in amber glass bottles of 100 capsules (NDC 0069-2600-66).

The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

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Issued January 1982

Pfizer LABORATORIES DIVISION
PFIZER INC., NEW YORK, N.Y. 10017

MSMA

NEWS ROUND - UP

March, 1982

MSMA Annual Session begins April 1

Missouri physicians will assemble at the Hyatt Regency Hotel in Kansas City for the 124th Annual Session of the Missouri State Medical Association. The four day session, April 1-4, will feature scientific programs, discussions on policies, banquets and special events.

The House of Delegates will begin addressing Association issues at 10:30 a.m., Thursday, April 1. The House will hold its second session at 9 a.m., Friday, and its final session at 7:30 a.m., Sunday.

All resolutions, plus committee and commission reports and Council minutes, will be referred to open Reference Committee meetings for debate on Thursday afternoon. All MSMA members are invited to attend these hearings and to express their opinions.

Opening the general session of the scientific program will be two speakers, Wilfred E. Wooldridge, M.D., Springfield, and John J. Coury, Jr., M.D., Port Huron, Michigan. Dr. Wooldridge, editor of *Missouri Medicine,* will speak on the topic "The Historical Background of Where American Medicine is Today and How It Got There." Dr. Coury, vice chairman of the American Medical Association's Board of Trustees, will speak on "Current AMA Topics."

Preliminary programs detailing the outstanding scientific sessions have been mailed to all MSMA members. Twenty-four programs sponsored by 17 medical specialties and three voluntary health organizations will be offered.

For 1982, the Hyatt Regency Hotel provides plenty of exhibiting space. More than 50 exhibitors will be on hand to display and discuss new drugs and medical equipment. Valuable prizes will be awarded in daily drawings.

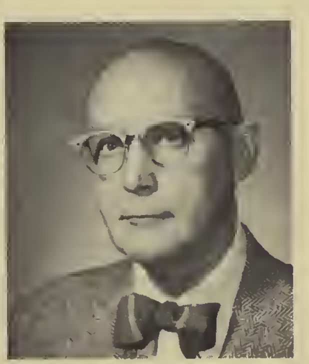
One of the biggest events during the four-day session is the Annual President's Banquet. John I. Matthews, M.D., Jefferson City, will take over MSMA leadership that evening when he accepts the President's gavel from Eugene T. Hansbrough, M.D., Poplar Bluff. Tickets for the banquet will be available at the MSMA Registration Desk.

In addition, the MSMA Auxiliary has a number of activities planned. Their agenda begins with the Fourth Annual Benefit Auction for MSMF/AMA-ERF. The auction begins at 6:30 p.m. on Thursday, April 1. There will be both professional and celebrity auctioneers.

Then, the Honorable Ike Skelton, U.S. Representative from Missouri's Fourth Congressional District, will address the MSMA Auxiliary/Public Affairs Breakfast, 7:30 a.m., Saturday.

Physicians' wives who are not Auxiliary members are also invited to participate in several of the group's activities. To find out more information about the MSMA Auxiliary, drop by the Auxiliary Registration Desk in the Hotel.

John J. Coury, Jr., M.D.


Wilfred E. Wooldridge, M.D.

For more information about MSMA's 124th Annual Session, contact MSMA Headquarters, 113 Madison, Box 1028, Jefferson City, MO 65102, (314) 636-5151.

CPI for 1981 shows physicians' charges up 11.7%

Charges for physicians' services rose 11.7% in 1981, according to the government's Consumer Price Index. The figure for the physicians' services component was higher than the 8.9% increase in the cost of living component and lower than the 13% rise in all services during the year.

The medical care index went up 12.5% in 1981. It was the only CPI category to show an increase over the 1980 figure. In 1980 medical care rose 10% compared to 12.4% for all items and 14.2% for all services. The physicians' service figure for 1980 was 11%.

The declining rate of increase for the all-items index was attributed by government officials to high crop and meat production that held the food price increase to 4.3% in 1981 compared with 10.1% in 1980, high mortgage interest rates that reduced the demand for housing the oil glut and fuel conservation that reduced energy costs, unemployment, and weak growth in overall personal income.

Other 1981 rates of increase in the medical care index, with 1980 figures in parentheses, were prescription drugs, 12.6% (9.8%); dental services, 10.2% (10.7%); medical care commodities, 11.3% (10%); and hospital room charges, 17% (13.9%).

In December, 1981, the increase in the physicians' services component was .5% — greater than the .3% rise in all items and the .4% rise in all services but slightly lower than other components of the medical care index. Prescription drug costs and hospital room charges both rose .8% in December. Charges for dental services went up .6% last month.

MSMA House to address sixteen resolutions

Immunization of preschool children and tax credits for physicians caring for indigent patients are just two of the many topics that will be addressed at MSMA's 124th Annual Session.

These resolutions, in addition to the committee and commission reports and Council minutes, have been referred to Reference Committees for debate.

According to the MSMA Bylaws, any resolution not introduced in the Delegates Handbook must be made available to the House of Delegates 24 hours before the session in which it is to be introduced. Sufficient copies of the resolution, or funding for copies, must be supplied by the individual or society introducing the resolution.

At the second session of the House, the same procedure must be followed, but such introduction is allowed only if approved by two thirds of the delegates voting. At the final session of the House, a unanimous vote of the delegates is required for introduction.

The resolutions submitted to date are:

No. 1 — Method of Determining Payment of Hospital Bills by Third Parties
No. 2 — MSMA Study of HMOs, IPAs and Hospital Satellite Clinics
No. 3 — Cancer Reporting by Missouri Hospitals
No. 4 — Medicine/Business Coalition
No. 5 — Retention of Missouri Health Data Corporation Data
No. 6 — Resolution No. Seven — UCR Terminology (A-81)
No. 7 — Model Program Using Tax Credits or Deductions to Physicians for Care of Indigent Patients
No. 8 — Tax Credits or Deductions to Physicians for Care of Indigent Patients
No. 9 — Code of Medical Ethics
No. 10 — Reimbursement for Care Provided in Physicians' Office
No. 11 — Federal Loan Programs for Medical Students
No. 12 — Civil Defense Funding
No. 13 — Dues Increase in 1983
No. 14 — Immunization of Preschool Children
No. 15 — Foreign Medical Graduate Representation on MSMA Council
No. 16 — Drugs of Abuse

Annual Session Schedule of Events

Thursday, April 1

8:00 a.m.	Registration of Delegates, **First Floor South (Lobby)**
10:30 a.m.	House of Delegates, Opening Session, **Regency New York/San Francisco**
1:00 p.m.	Reference Committee Meetings
6:30 p.m.	Fourth Annual Benefit Auction of the AMA-ERF and MSMF, **Regency Atlanta Room**

Friday, April 2

8:00 a.m.	Registration, **First Floor South**
9:00 a.m.	General Session, **Regency New York Room**
	Introductions: **E.T. Hansbrough, M.D.,** Poplar Bluff, MSMA President
	Speaker: **Wilfred E. Wooldridge, M.D.,** Springfield, Editor, *Missouri Medicine*
	Topic: *The Historical Background of Where American Medicine Is Today and How It Got There*
	Speaker: **John J. Coury, Jr., M.D.,** Port Huron, Michigan, Vice Chairman, Board of Trustees, American Medical Association
	Topic: *Current AMA Activities*
11:00 a.m.	Scientific Sessions Begin
2:30 p.m.	Missouri State Medical Foundation Annual Meeting, **Regency New York Room**
3:30 p.m.	Intermission to View Exhibits
4:00 p.m.	House of Delegates, Second Session, **Regency New York Room**
6:00 p.m.	Reference Committee Meeting

Saturday, April 3

7:30 a.m.	MSMA Auxiliary/Public Affairs Breakfast, **Regency Chicago A Room**
	Speaker: **The Honorable Ike Skelton,** Lexington, U.S. Representative, Missouri Fourth Congressional District
8:00 a.m.	Registration, **First Floor South**
8:00 a.m.	Exhibits Open
8:00 a.m.	Scientific Sessions Begin
9:30 a.m.	"Discuss the Issues with Your AMA Delegates," **Chouteau A Room**
10:30 a.m.	Intermission to View Exhibits
12:30 p.m.	Fifty-Year Club Luncheon, **Van Horn A Room**
1:30 p.m.	MMPAC, **Regency Chicago B Room**
6:30 p.m.	MSMA Social Hour for Those Attending President's Banquet, **Regency Foyer**
7:15 p.m.	MSMA Annual President's Banquet, **Regency San Francisco and Chicago Rooms**

Sunday, April 4

7:30 a.m.	House of Delegates Breakfast and Final Session, **Regency New York Room**

Dr. John Matthews to take MSMA gavel at President's Banquet

Eugene T. Hansbrough, M.D.
President

John I. Matthews, M.D.
President-Elect

John I. Matthews, a Jefferson City internist, will become president of the Missouri State Medical Association during the President's Banquet, Saturday night, April 3, at the Hyatt Regency Hotel in St. Louis.

At this banquet, President Eugene T. Hansbrough, M.D., a Poplar Bluff general surgeon, will present the MSMA gavel to President-Elect Dr. Matthews.

Dr. Matthews is the immediate past chairman of MSMA's governing council. He served as secretary of the association from 1959 to 1980 and has been chairman of the MSMA Committee on Legislative Affairs since 1966.

A 1943 graduate of the Wayne State University School of Medicine, in Detroit, Dr. Matthews served his internship at the Wayne County Hospital. He took his residency in internal medicine at the Jefferson Barracks Hospital in St. Louis. Dr. Matthews has been in private practice in Jefferson City since 1951.

Dr. Matthews, a diplomate of the American Board of Internal Medicine, was re-certified by the Board in 1975. He is also on the MSMA Liaison Committee with the Board of Healing Arts.

Childhood diseases decline in Missouri

As Missouri moves toward successful completion of its drive to eliminate measles, a pleasant side effect is occurring — a decline in other childhood diseases, including rubella, diphtheria, tetanus and whooping cough.

Only one case of measles was reported in Missouri during 1981, says the Missouri Division of Health. It is the closest the state has come to having a year without measles. The single case in 1981 compares well with 67 cases in 1980 and 436 in 1979.

"Last year's near perfect record shows the effectiveness of the measles vaccine," says Dr. Mohammad N. Akhter, state health director. "It also demonstrates the necessity to continue high levels of immunization for measles and other diseases for which effective vaccines are available."

Officials of the Centers for Disease Control say that in 1981 only 2,968 cases of measles were reported nationally — down from 13,500 reported in 1980.

In Missouri, Dr. Akhter estimates that 95% of all elementary school children are immunized. Among preschool children the figures drop down to about 70 percent. Dr. Akhter warns that this area still threatens disease control, making it necessary to seek legislation requiring immunization of all children who either attend preschools or babysitters.

MSMA House of Delegates will be voting on a resolution concerning this issue at the Annual Session in Kansas City.

Also last year, Missouri had only two rubella (German measles) cases reported. The previous annual low was 45 cases in 1980.

"Like measles, the key to rubella control is the maintenance of high immunization levels," says Dr. Akhter. "The state can ill afford to allow the immunization levels for any of the so-called childhood diseases to fall below their present high levels."

Missouri health data reported for 1981 also shows that the state experienced its second straight year without a case of diphtheria; reported cases of whooping cough dropped from 30 cases in 1980 to 23 cases last year; and the state reported one case each of polio and tetanus.

Retirement workshops set

The 1982 series of "Gearing Up for Retirement" workshops has been scheduled by the AMA Dept. of Practice Management. One-day sessions will be held on March 24, April 16, May 14, June 11, July 23 and Aug. 20, at the AMA Headquarters in Chicago. Workshops cost $100 for AMA members. Spouses may attend at no additional charge. Details are available from the AMA Dept. of Practice Management, 535 North Dearborn St., Chicago, Illinois 60610.

Dr. Durward Hall to receive MSMA Award

Durward G. Hall, a general surgeon from Springfield, will receive MSMA's first award for Citizenship and Community Service. It will be presented during MSMA's Annual Session, April 1-4, at the Hyatt Regency Hotel in Kansas City.

Dr. Hall has served his community as founder of the 11th Regional Red Cross Blood Center, past president of the Springfield Chamber of Commerce, past president of the Missouri Chamber of Commerce, member of the Drury College Board of Trustees, member of the YMCA Board of Directors, plus many other positions.

In health related areas, Dr. Hall was past president of the Greene County Medical Society, past president of the local chapter of the American College of Surgeons, congressional adviser of the XV World Health Assembly WHO in Geneva, Switzerland, and a member of MSMA and AMA.

In addition, Dr. Hall has been active politically. He served six terms (1960-72) as a U.S. Representative to Congress. Dr. Hall served on the House Armed Services Committee, Joint Committee on Congressional Operations and was chairman of the Republican Objectors for Consent Calendar.

PR Update

From the time of Hippocrates, over 2,000 years ago, doctors have been seeking the causes and cures of diseases that afflict mankind.

While there have been hundreds of great medical discoveries, one of the most significant occurred on March 30, 1842, when Crawford W. Long, M.D., used an ether anesthesia in surgery.

The date has continued in significance as the Missouri State Medical Association Auxiliary has adopted it as Doctors' Day. Auxiliary members statewide will be saluting doctors of medicine by presenting them with red carnations and special honors.

The Missouri State Medical Association also would like to take this opportunity to express their appreciation to Missouri physicians, whose devotion and cooperation enable us to work toward a common goal — continued quality health care for the people of Missouri.

Med school enrollment up

The number of students enrolled in the U.S. medical schools during the 1980-81 academic year increased slightly over the previous year.

There were 65,497 medical students in schools across the U.S., up from 64,195 in the 1979-80 academic year. The total enrollment included 79 students from Canada and 946 students from other countries.

The number of applicants for the 1980-81 academic year was 36,100, a slight decrease from the number applying in the preceding year, and a 15.3 percent decrease from the peak year 1974-75. This was the sixth consecutive year of decline in medical school applications. The number of applicants accepted was 17,146.

The number of women entering medical school continued to increase. For the 1980-81 academic year, there were 4,970 women in the entering class, an increase of four percent over the preceding year. More than 46 percent of women who applied to medical school were admitted. Approximately 29 percent of the students entering medical school in the 1980-81 academic year were women, a figure that is three times the percentage of women entering medical school in 1969, when enrollment of women in medicine began to increase.

Determination of Death bill to be considered by House

The Missouri House of Representatives will soon consider a Determination of Death bill supported by MSMA. The bill, HB 1223, would include brain death as one method of determining when death occurs.

John I. Matthews, M.D., chairman of the MSMA Committee on Legislative Affairs, has stated that HB 1223 stands a good chance of passage this Session if the medical community will inform their elected officials that medicine favors the bill. HB 1223 is a compromise measure that has evolved through discussions with Legislators, attorneys and religious organizations. The entire bill reads:

> Section 1. For all legal purposes, the occurrence of human death shall be determined in accordance with the usual and customary standards of medical practice, provided that death shall not be determined to have occurred unless the following minimal conditions have been met:
>
> (1) When respiration and circulation are not artificially maintained, there is an irreversible cessation of spontaneous respiration and circulation; or
>
> (2) When respiration and circulation are artificially maintained, and a licensed physician has determined that there is a total and irreversible cessation of all brain function.

Efforts by several allied health groups to gain licensure have apparently failed for the current Session. In opposing bills which would have licensed occupational therapists, radiologic technicians, physician assistants, physical therapy assistants and others, the MSMA pointed out that each proposal would carve out a specialized service which could be performed only by a licensed person. This would result in personnel shortages and higher health care costs.

Incidentally, an amendment offered by the physical therapists in Committee would remove the current requirement that a P.T. offer services under the prescription of a physician. This is seen as an effort by P.T.'s to establish independent practice.

Several bills supported by MSMA have continued to progress and stand a chance of passage this year. These include SB 481, which increases the threshold for Certificates-of-Need, SB 717, which reorganizes the Ellis Fischel Hospital, and SB 522, which would prohibit the sale of imitation controlled substances.

The General Assembly remains in Session until midnight, April 30.

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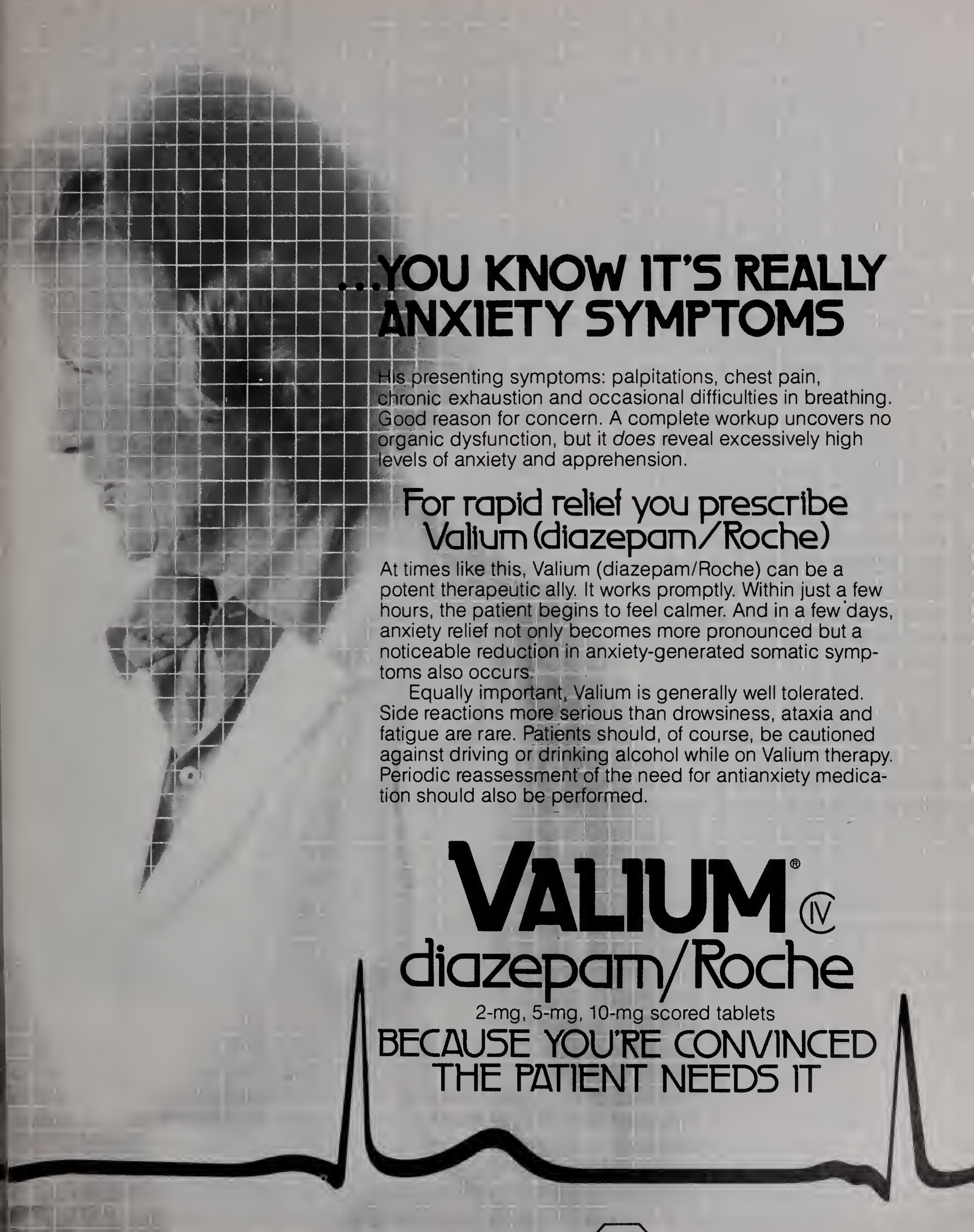

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The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
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Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
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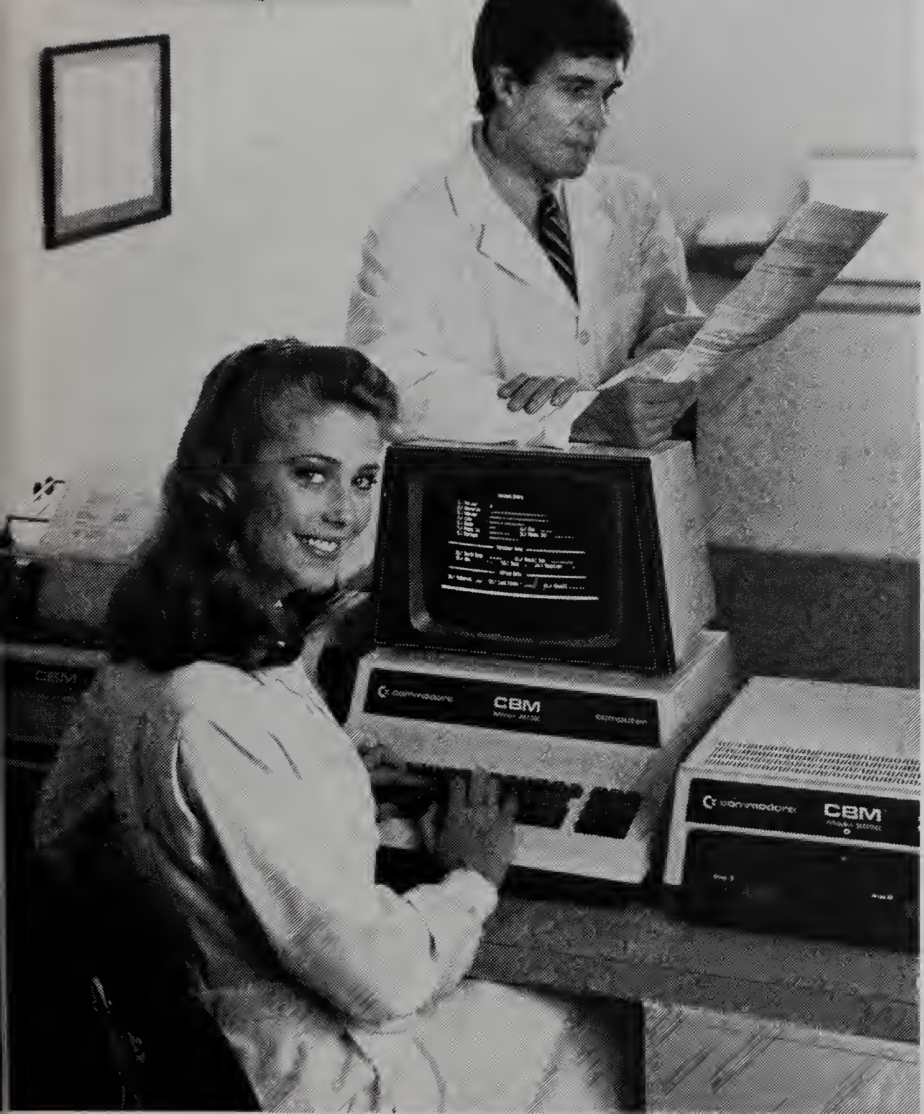

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Photo-Comment by James W. Clawson, M.D., Springfield

"The pt's don't like it, but it sure is cost effective."

Editor's Corner

All in a Day's Work

It seems to me there are too many throw-away medical journals — and their number seems to be steadily growing. The volume of material simply overwhelms one's ability to read it.

It is a temptation to throw the whole lot in the wastebasket. The problem is that most of them are ingenious, well-written and superior to many of our organizational medical journals.

Where does one draw the line?

* * *

Recently had a colleague give me a bit of disturbing information. He said, "Over the age of 50 the incidence of demonstrable microscopic carcinoma of the prostate roughly parallels the age."

* * *

A skin cancer patient said to me, "Be easy on me, Doc. I have no insurance. I just trust in the Lord."

Said I, "In my opinion, you are putting quite a strain on the Lord. What would happen if you were all fractured up in an auto accident and had to spend three months in the hospital?"

He replied, "I just spend my money. I know the Lord will take care of me."

I didn't charge any less, but neither did I charge any more. I figured the Lord had his hands full with this one.

* * *

A pitiful story from a patient who had lived in the country and who had a house cat. Seems the cat somehow got outside and got all skunked up.

"What did you do," I inquired.

"Everything we could think of," came the reply, "and it didn't help."

"What did you do then?"

"We called the vet. He said nothing worked too well. We could try washing the cat real good in tomato juice."

"And," I inquired.

"I did that," he said. "Three big cans. Then it smelled like a skunky cat that had been washed in tomato juice. But," he added, "That wasn't the worst of it. Now I can't bear even the thought of a Bloody Mary."

* * *

Haven't heard the last of this, and not likely to.

A patient left his unlocked car in the parking lot of our building. He forgot a urine specimen he was to bring to our office. It lay in the front seat in a half-pint whiskey bottle.

About the time he got up to our office, he remembered the speciman and returned for it.

It was gone.

* * *

It occurred to me that if a lady and her boy friend both had scabies, they did not give it to each other, no matter what the history.

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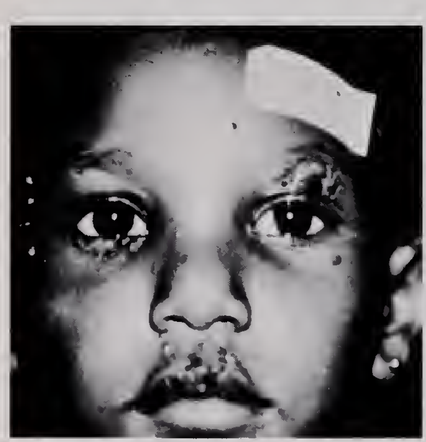
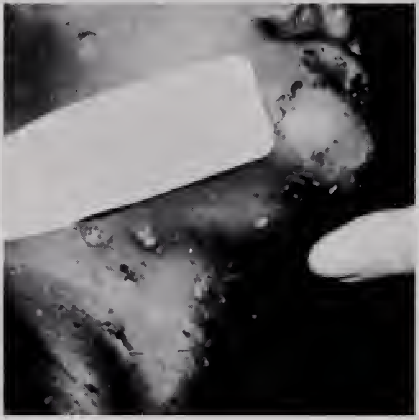
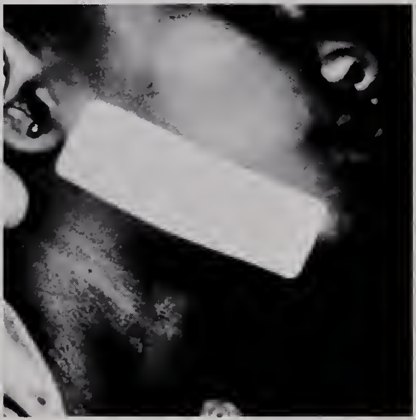


As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

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*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

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For complete information, consult Official Package Circular. (12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

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IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® *(cloxacillin sodium)*	Given *penicillin V-K*
Staphylococcus aureus	(78 patients)	39	39
Returned to clinic at one week		29†	38†
Treatment failure at one week		0	18 (47.4%)
Staphylococcus aureus and *Streptococcus pyogenes*	(9 patients)	4	5
Returned to clinic at one week		4	5
Treatment failure at one week		0	2 (40%)
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic ***Streptococcus***	(1 patient)	0	1
TOTALS:	**102 patients**	**52 patients**	**50 patients**

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus,* 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes,* and 1% beta-hemolytic *Streptococcus*.‡
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.
- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

‡The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

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WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

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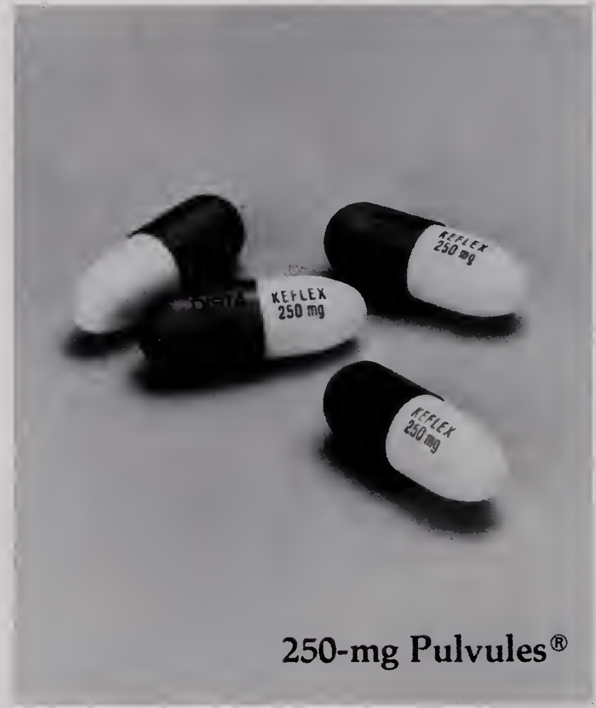

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A Tonic for Geriatric Patients

A pleasant tasting tonic containing iron, vitamins, minerals, and an analeptic. Ideal for those who may benefit from vitamin deficiency prevention. Just one tablespoon before each meal.

DESCRIPTION Forty-five milliliters of SU-TON contains the following ingredients Pentylenetetrazol, 30 mg • Niacin, 50 mg • Vitamin B-1, 10 mg • Vitamin B-2, 5 mg • Vitamin B-6, 1 mg • Vitamin B-12, 3 mcg • Manganese (as Manganese Sulfate), 1 mg • Magnesium (as Magnesium Sulfate), 2 mg • Zinc (as Zinc Sulfate), 1 mg • Iron (as Ferric Pyrophosphate, Soluble), 22 mg • Alcohol, 18%

INDICATIONS AND USAGE SU-TON contains pentylenetetrazol which may be helpful in the older patient as an analeptic agent when mental confusion and memory defects are present SU-TON also contains vitamins, trace minerals, and iron, for those patients who may benefit by preventing the development of a deficiency

CONTRAINDICATIONS Epilepsy, convulsive disorders or known history of sensitivity to any of the listed active ingredients

WARNINGS The safety of this preparation during pregnancy and lactation has not been established Use of this drug requires that the physician evaluate the potential benefits of the drug against any possible hazard to the mother and child

PRECAUTIONS Although there are no absolute contraindications to pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold or a focal brain lesion Caution should be exercised when treating patients with high doses of SU-TON who have heart disease While pentylenetetrazol does not act directly on the myocardium, the results from central vagal stimulation could cause bradycardia

ADVERSE REACTIONS Pentylenetetrazol in high doses may produce toxic symptoms typical of central nervous system stimulants, which act on the higher motor centers and the spinal cord Convulsions resulting from this drug are spontaneous and are not induced by external stimuli. They usually last for several minutes and are followed by profound depression and respiratory paralysis Death has been reported from the ingestion of 10 grams of pentylenetetrazol.

DRUG ABUSE Drug dependence has not been reported with SU-TON

OVERDOSAGE Signs and symptoms of acute overdose may be due principally from overstimulation of the central nervous system and from excessive vasodilatation with resulting autonomic nervous system imbalance The symptoms may include the following vomiting, agitation, tremors, hyperreflexia, sweating, confusion, hallucinations, headache, hyperpyrexia, tachycardia Treatment consists of appropriate supportive measures If signs and symptoms are not too severe and the patient is conscious, gastric evacuation may be accomplished by induction of emesis or gastric lavage Intensive care must be provided to maintain adequate circulation and respiratory exchange

DOSAGE AND ADMINISTRATION One tablespoonful (15 ml) 3 times a day 20–30 minutes before meals This drug is not for use in children under 12 years of age

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ROBERT D. FRY, M.D., IRA J. KODNER, M.D.
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Treatment of Rectal Carcinoma by Intracavitary Irradiation

The classic treatment of carcinoma of the rectum involves radical surgical extirpation. With modern surgical techniques, lesions in the upper and middle third of the rectum can be resected transabdominally with preservation of anal sphincter function. However, standard radical surgical extirpation of a lower rectal lesion requires abdominoperineal proctectomy with creation of a permanent colostomy.

As Beahrs has noted, "It is unfortunate to have established a permanent colonic stoma if the radical operation has not contributed to the future well-being of the patient."[1] A growing collection of literature has now established the fact that certain selected rectal cancers may be appropriately treated for cure by local methods.[2-4] Intracavitary irradiation has certain advantages over other methods of local control to commend it as the treatment of choice for such tumors.

Rationale for Local Therapy

The rationale for local treatment of rectal cancer is based upon the acceptance of two simple but important facts: (1) Radical surgical excision is not necessary for control of a lesion that is localized and (2) a cancer that has spread completely through the rectal wall cannot be cured by local methods.

If a method can be shown to eradicate localized cancer satisfactorily, then the success of that method must rest upon the physician's ability to select lesions appropriate for treatment.

Adenocarcinoma of the rectum has generally been considered to be only slightly radiosensitive. However, this concept is based upon experience using external radiation. The time-dose and volume-dose relationship with external irradiation differs markedly from these factors when intracavitary irradiation is used.

With external irradiation, for example, a dose of 3,000 rads is delivered over a period of three weeks. The irradiated area includes a large volume of normal tissue as well as the target carcinoma. With intracavitary irradiation, the dose of 3,000 rads is delivered directly to the carcinoma over a period of two to three minutes.

Intracavitary irradiation has been proven to be a useful modality for treatment of selected cases of carcinoma of the rectum. Rectal cancers selected for cure should be well differentiated histologically and limited to the rectal wall. This article includes a review and cites appropriate equipment for this contact treatment.

The authors are from the Department of Surgery at The Jewish Hospital of St. Louis and Washington University School of Medicine.

The acceptable tolerance dose for external irradiation to the rectum is probably 5,000 rads. Higher levels of radiation result in unacceptable complications that include proctitis, stricture and fistula formation. By contrast, up to 15,000 rads can be delivered directly to the tumor using intracavitary irradiation with no, or minimal, side effects. The difference in the time-dose and volume-dose relationship accounts for the observation that a rectal carcinoma that is only slightly radiosensitive to external irradiation will rapidly regress when treated by intracavitary irradiation.[5, 6]

The method for intracavitary irradiation has several advantages over fulguration. The technique is done on an ambulatory basis, and only a local anesthetic is required. Lesions of the anterior rectal wall in women are readily treatable by intracavitary irradiation, whereas fulguration of such lesions is contraindicated because of subsequent fistula formation.[6]

Selection of Patients

The successful management of rectal cancer using intracavitary irradiation rests upon the appropriate selection of patients. The diameter of the treatment proctoscope is 3 cm. Two contiguous fields may be treated. However, a lesion amenable for treatment must not be larger than 3 cm by 5 cm.

This method is not an acceptable modality of treatment when lymphatic metastases have occurred. Digital rectal examination may reveal a hard nodule cephalad to the tumor which is characteristic of lymphatic metastases. Such a finding should be a contraindication to treatment by intracavitary irradiation.

Dukes and Bussey[7] have shown that well differentiated adenocarcinoma has a 30% incidence of lymph node involvement, whereas anaplastic rectal carcinoma has an 80% incidence of lymphatic spread. Morson[8] found that only 11% of cases had lymphatic metastases when the rectal wall was not penetrated. Thus, to exclude cases with lymphatic spread, the tumor should be histologically well differentiated or moderately well differentiated, no fixation should be present, and no clinically involved nodes should be palpable. Polypoid lesions are more favorable than ulcerated lesions. While the depth of tumor invasion correlates with the degree of fixation, it is at times clinically difficult to ascertain the depth clinically. A failure of the tumor to regress has indicated that some questionable lesions cannot be successfully treated by this method. Should treatment by intracavitary irradiation fail or should metastatic lymph nodes later become clinically obvious, then the patient may yet be salvaged with standard abdominoperineal resection.[6, 9]

Method of Treatment

All patients should have a barium enema to exclude syncronous colonic carcinoma. Prior to treatment, a prepackaged small Fleet's enema is given. The patient is placed on the proctoscopic table and the anus anesthetized with 50% bupivacaine hydrochloride (Marcaine). Anal dilatation is performed to allow insertion of a special 3 cm proctoscope designed to admit the Philips RT 50 x-ray tube. The tube delivers 1,500 to 2,000 rads per minute. Substantial absorption of the x-ray beam occurs. At 1 cm of tissue depth, only 25% of the surface dose is delivered and at 2 cm depth, only 10% of the surface dose is delivered.[9] A short application (two to four minutes) is given. Depending upon the response to treatment, three to five applications are given over a period of four to six weeks. The patient continues daily normal activities out of the hospital between treatments.

Fragile, elderly or senile patients are easily treated using this method. Certain persistent lesions that have reduced in size following intracavitary irradiation are amenable to interstitial irradiation of the tumor bed. Papillon has used an iridium implant in which a dose of 2,000 to 3,000 rads is delivered to an area of 3 cm x 2½ cm over two to three days.[6] Hospital admission is required if interstitial irradiation becomes necessary.

Results of Treatment

The tumor mass diminishes rapidly following every treatment with intracavitary irradiation. The dose of each treatment as well as the intervals between each application and the size of the field are determined by the response of the tumor. The total exposure is between 10,000 and 15,000 rads given over a period of four to six weeks. If a small localized area of tumor remains after a full course of treatment, an additional dose of 2,000 to 3,000 rads may be given by interstitial radium needle.

Papillon has treated 170 cases of selected rectal cancers by this method that are now available for five-year follow up. The five-year survival is 74%, and the death rate from cancer is only 11%.[10]

Ninety-one of Papillon's patients were observed for ten years with a 55% survival rate. Only 12% of these patients died from rectal cancer.

(Continued on page 156)

JANET HARRISON, M.D., RICHARD SARGENT, M.D.
and G. W. N. EGGERS, JR., M.D., *Columbia*

Removal of Bilateral Pheochromocytomas Using Isoflurane Anesthesia

Case Report

Isoflurane was chosen as the anesthetic agent for the removal of bilateral pheochromocytomas in a patient prepared preoperatively with alpha-methyltyrosine. The authors encountered little difficulty with the expected problems of ventricular dysrhythmias and extreme fluctuations in blood pressure and no adrenergic blocking agents during anesthesia were required.

The authors are from the University of Missouri-Columbia Health Sciences Center.

The management of patients with pheochromocytomas during surgery has long been a challenge for the anesthesiologist. The problems commonly encountered include hypertension with possible cerebrovascular accident, congestive heart failure, ventricular dysrhythmias, hypovolemia due to a chronically constricted blood volume, and hypotension after removal of the tumor.

Many inhalation anesthetic agents have been used. In recent years, enflurane has been used. These have seemed to be associated with a reported decrease in dysrhythmias.[1] Other authors have satisfactorily used neuroleptanesthesia.[2] However, Sumikawa and Amahata[3] have reported increased blood pressure (BP) with droperidol administration. Conner, Miller, and Katz[4] used isoflurane for removal of a unilateral pheochromocytoma with a rise in BP to 250/115 without associated dysrhythmias.

Isoflurane offers advantages of peripheral vasodilatation, absence of sensitization of the myocardium to catecholamines and maintenance of cardiac output at near-awake levels. Therefore, it was chosen as the primary anesthetic agent for removal of bilateral pheochromocytomas in the following patient.

Case Report

A 42-year-old white woman with a seven-year history of hypertension was admitted for evaluation of frontal headaches, often associated with palpitations. Her headaches usually occurred on awakening; maximum concurrent BP was 180/120. In addition, she experienced episodes of lightheadedness, paroxysmal hunger, fine hand tremor, nervousness, heat intolerance and intermittent left-leg paresthesias. Her past medical history included von Hippel-Landau's disease, which had been diagnosed 20 years previously.

A twenty-four hour urine collection revealed catecholamines = 448 μcg (nl < 135 μcg) with 294 epinephrine and 154 norepinephrine, metanephrines = 5.1 μcg (nl 0.3-0.9), and vanillylmandelic acid (VMA) within normal limits. Arteriogram showed a 6 cm x 4 cm right adrenal mass, a 5½ cm x 3 cm left adrenal mass and intense vascular blushing in the left paravertebral area suggestive of an extra-adrenal catecholamine-producing tumor.

Treatment was instituted with 1 gm of alpha-methyltyrosine daily and was gradually increased to 4 gm per day over the next week. Urinary measurements one week after initiation of therapy revealed a decrease in metanephrines from 5.1 μcg to 2.9 μcg. After two weeks of treatment, the patient's BP was consistently 120-130/80-90 and she reported a decrease in her symptoms of headaches and nervousness.

The patient was premedicated with 10 mg of diazepam (Valium), P.O., and 10 mg of morphine intramuscularly. In the operating room, a radial artery cannula and an internal jugular Swan-Ganz flow-directed thermodilution catheter were placed. Prior to induction of anesthesia, BP was 148/90; pulse, 90 beats/minute; pulmonary capillary wedge pressure (PCWP) 15 torr; cardiac index (CI) 4.88 l/min/m^2.

Anesthesia was induced with sodium thiopental, 3 mg/Kg. The patient was ventilated with 50% N_2O, 50% O_2 and isoflurane 1% and then intubated following relaxation with pavulon 0.08 mg/Kg. At the time of intubation, BP rose to 190/100, but subsequently stabilized at 120 systolic with N_2O at 3 l/min, O_2 at 2 l/m and isoflurane 0.25-0.75%.

At the time of removal of the first adrenal, the patient's BP rose from 120/70 to 230/106 and her pulse rose from 90 to 120. Sodium nitroprusside at 1 μcg/Kg/min was infused briefly (< 3 minutes) with a rapid return of BP to 140/80.

There were three episodes of sudden bradycardia

(50-60 beats/min) with associated hypotension (70-80 systolic) prior to removal of the second adrenal. These episodes seemed to be related to surgical traction on the viscera and responded immediately to administration of atropine intravenously. There were no other problems with hypotension during the operative procedure; PCWP ranged from 8-16 torr.

At the time of removal of the second adrenal, the patient developed atrial fibrillation with a ventricular response of 120/min with BP at 100-110 systolic. This continued until the end of the procedure at which time the patient was electrically cardioverted to sinus rhythm with a rate of 80/min. Cardiac index was measured at 2.27 $1/min/m^2$ during atrial fibrillation, but was increased to 2.51 $1/min/m^2$ after cardioversion.

The operative procedure included bilateral adrenalectomies, splenectomy, excision of uterine mass, excision left inferior renal pole mass, and reimplantation of adrenal cortex into the left forearm with total operative time of 7½ hours. Only the adrenal specimens were histologically consistent with pheochromocytoma. The estimated blood loss was 2800 ml; fluid replacement included 2 units of whole blood, 4 units of packed red blood cells, and 9 liters crystalloid; urinary output was 1640 cc.

The patient was extubated at the end of the procedure and was transported to recovery room where her BP was 115/65; pulse, 80; resp, 16; PCWP, 9; and CI = 3.28 $1/min/m^2$. Postoperatively, she did well and was discharged two weeks postoperatively with a BP of 140-170/80-90.

Discussion

Von Hippel-Landau's disease, also known as retinocerebral angiomatosis or angiomatosis retinae, is often familial, dominantly transmitted. There is a well-known association of pheochromocytoma with neurofibromatosis[5] and, in recent years, a number of cases of pheochromocytomas in patients with von Hippel's syndrome have been reported.[6] In addition, the adrenal tumors are more apt to be bilateral in patients with von Hippel-Landau's disease.[7]

The preoperative diagnosis of pheochromocytoma has often been based on laboratory findings in conjunction with the patient's history. However, Sheps *et al*[8] in studying 65 urine specimens of 28 patients with pheochromocytomas, found that only 52% had elevations in both urinary VMA and catecholamine levels. In this same study, 17% had elevated urinary catecholamines and normal VMA values as did this patient.

The objective of therapy is prevention of the physiologic and metabolic effects of the catecholamines secreted by the tumor. This may be accomplished by adrenergic blockade using alphablockers, phenoxybenzamine for prolonged action or phentolamine for short action. Betablockers may be added to protect against dysrhythmias and tachycardia. A second method of treatment is the use of alpha-methyltyrosine to inhibit tyrosine hydroxylase, the catalyst in the rate-limiting step from tyrosine to dopa in catecholamine synthesis.[9]

While the preoperative treatment with alphamethyltyrosine is thought to decrease intraoperative problems with BP control, it may not eliminate episodes of hypertension or arrhythmias. We found that we had minimal problems with either of these two possibilities intraoperatively and, with the exception of one brief administration of sodium nitro-prusside, gave no antihypertensive or vasopressor drugs.

In conclusion, we found isoflurane quite satisfactory as the primary anesthetic agent in this case of pheochromocytoma removal. As this agent becomes available for general use, it may prove useful in similar situations of increased catecholamine production.

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"There are only two lasting bequests we can hope to give our children. One of these is roots; the other wings." — Hodding Carter

JOHN B. MARSHALL, M.D., *Columbia*

Zollinger-Ellison Syndrome: Diagnosis and Treatment

The Zollinger-Ellison Syndrome (ZES) is characterized by gastrin-secreting tumors (gastrinomas) that, via release of gastrin in large amounts, cause hypersecretion of gastric acid with resultant peptic ulcers and diarrhea.

Gastrinomas occur most frequently as non-beta islet cell tumors in the pancreas, but they have also been found in the duodenum, stomach, hilus of the spleen, lymph nodes and ovaries. More than 50% of patients have multiple pancreatic gastrinomas.[1] At the time of surgery, it is not possible to identify the tumor in one half to two thirds of patients.[1] In other cases, what appears to be a single pancreatic tumor is found at surgical exploration, only for the syndrome to recur postoperatively because the multiple tumors or metastases present were not grossly apparent at the operation. About two thirds of gastrinomas are malignant, with metastases to the liver and regional lymph nodes being common.

Hypergastrinemia mediates the pathophysiologic features of ZES. It serves as a potent stimulus to gastric acid hypersecretion and also exerts a trophic influence on the gastrointestinal (GI) mucosa, with resultant hyperplasia of the parietal cell mass. Late in the disease course, clinical manifestations directly related to tumor progression may occur.

The classical clinical presentation of ZES, as described in 1955 by Zollinger and Ellison, is that of severe and recalcitrant peptic ulcer disease, with the ulcers commonly occurring in atypical locations or after previous surgical treatment of peptic ulcer disease.[2] Presently, ZES is being recognized at an earlier stage in its natural course.[3-6] Ulcer disease develops in more than 90% of patients with ZES during the course of their disease. Most ulcers are small or moderate in size and are located in the duodenal bulb or stomach, but they may be large, multiple and found in the distal duodenum, jejunum and, rarely, in the esophagus. Symptoms are generally similar to those in patients with common peptic ulcer, but they are usually more persistent, progressive, virulent and less responsive to therapy. Diarrhea, due primarily to the large volume of gastric acid secreted into the GI tract, is present in more than one third of patients. About 7% of patients with ZES have diarrhea without active ulcers.[4] Some patients have mild steatorrhea. The clinical features of ZES are reviewed in several papers.[1, 3, 4, 6-10]

Diagnosis of ZES

Abnormalities on upper GI x-ray series may suggest the diagnosis of ZES. Atypical ulcer features may be present, such as unusual location or multiple or giant ulcers. There may also be increased prominence of mucosal folds of the stomach and proximal small bowel, as well as large amounts of fluid contained within these areas of the upper GI tract. Enlarged gastric folds, in themselves, are a nonspecific finding and may represent a normal variant or occur with gastric lymphoma, gastric cancer, Menetrier's disease, "hyperplastic" gastritis, eosinophilic gastritis, Crohn's disease, syphilis, amyloidosis and gastric varices.

Detection of markedly elevated serum gastrin levels by radioimmunoassay establishes the diagnosis of ZES in patients with compatible clinical features and gastric acid hypersecretion. In patients with less pronounced gastrin elevations, gastrin response during provocative testing is useful in establishing or excluding the diagnosis.

Since Zollinger-Ellison Syndrome was first described, diagnosis and management have evolved considerably. Introduction of the H_2-histamine receptor antagonists has offered an option drastically different from previous therapy.

Dr. Marshall was from the Department of Medicine, Division of Gastroenterology and Liver Disease, University of Missouri-Columbia Health Sciences Center at the time this paper was written. He is now with the Division of Digestive Diseases and Nutrition, University of Nebraska Medical Center in Omaha.

Although gastric secretory studies are helpful in identifying patients with ZES, they do not discriminate adequately between ZES and common peptic ulcer to allow the diagnosis of ZES to rest entirely on their results.[1, 4, 8, 11-14] Measurement of serum gastrin is the most reliable way of establishing the diagnosis of ZES.[1, 4, 6, 8] Table 1 lists the indications for obtaining a fasting serum gastrin level and for considering doing gastric secretory studies for the diagnosis of ZES.

There is considerable overlap in the rates of basal gastric acid output (BAO) among normal individuals, those with duodenal ulcer and patients with ZES. The BAO is 15 meq per hour or greater in one half to two thirds of patients with ZES compared with 3% to 10% of patients with ordinary duodenal ulcer.[4, 11, 15] Because most patients with ZES have near-maximal BAO rates, it is more helpful to compare the ratio of BAO to maximal acid output (MAO) following stimulation with pentagastrin. The ratio of BAO to MAO is over 0.6 in about one half to two thirds of patients with gastrinomas, but in only 2% to 4% of patients with duodenal ulcer without ZES.[4, 11, 15] Measurement of acid secretion in the postoperative stomach is more variable because of less complete recovery of acid as well as neutralization by refluxed alkaline secretions.[4] Basal acid secretion greater than 5 meq per hour in such patients is suggestive of ZES.[4, 11]

In patients with compatible clinical features and gastric acid hypersecretion, fasting gastrin levels over 500 pg/ml are strongly suggestive of ZES and levels over 1,000 pg/ml are essentially diagnostic (upper limit of normal, 150 pg/ml). Deveney says that a serum gastrin level over 500 pg/ml accompanied by hypersecretion of acid is diagnostic of ZES.[6] However, there is substantial overlap between normal individuals, those with common peptic ulcer and patients with ZES. About 40% of patients with ZES may have fasting gastrin levels from 100 to 500 pg/ml, whereas about 10% of ulcer patients without evidence of gastrinomas have fasting gastrin levels in that range.[16] Also, hypergastrinemia may be found in conditions besides gastrinoma, including occasional patients with typical peptic ulcer disease, retained gastric antrum syndrome, primary antral G-cell hyperplasia, gastric outlet obstruction, postvagotomy, chronic renal failure, atrophic gastritis (including pernicious anemia) and short bowel syndrome. Most of these conditions can be easily distinguished from ZES as the cause of hypergastrinemia by consideration of the clinical setting and by gastric acid secretory study.

TABLE 1

INDICATIONS FOR OBTAINING A FASTING GASTRIN LEVEL AND CONSIDERING GASTRIC ACID SECRETORY STUDIES FOR EVALUATION OF ZES

1. Atypical ulcer features:
    Unusual location
    Multiple or giant ulcers
    Failure to respond to usual medical therapy
    Post op ulcer recurrences
2. Radiographic features, including atypical ulcer features (above), prominent mucosal folds of stomach and upper intestine, and large amounts of fluid in upper GI tract.
3. Diarrhea in association with peptic ulcer disease.
4. Secretory diarrhea without peptic ulcer disease.
5. Elevated serum calcium level in association with peptic ulcer disease.
6. Peptic ulcer disease with family history of ulcer disease, pituitary tumors, or hyperparathyroidism.
7. Planning elective or semi-elective ulcer surgery.

If the diagnosis of ZES is suspected but the fasting gastrin level is less than 1,000 pg/ml, then several repeat determinations can be performed. If the diagnosis of ZES is still not established or excluded, then a provocative test should be performed. Several provocative tests are available. They entail measurement of serum gastrin levels in response to intravenous injection of secretin, intravenous calcium infusion or a test meal.[1, 4, 6, 16-18] The secretin injection test is the preferred provocative test at the present time for the diagnosis of gastrinoma.[16-18] It is preferred over the calcium infusion test because it requires less time, has less risk of side effects and has fewer false positives and negatives. It is better studied than the test meal provocative test and appears to be more accurate.

In normal individuals and those with ordinary peptic ulcer disease, secretin injection either causes a decrease or there is no significant change in serum gastrin levels. However, in patients with ZES, it causes a paradoxical and often marked increase in the serum gastrin. The mechanism accounting for this phenomenon is unknown.

McGuigan and Wolfe emphasize the importance of standardization of performance and interpretation of secretin injection testing.[17] Their recommended protocol entails the intravenous bolus injection (over 30 sec) of pure GIH secretin (2 U/kg body weight in 10 ml of 0.9% NaCl). Serum gastrin levels are obtained preinjection (fasting) and at 5-minute intervals for 30 minutes. Some also obtain a serum gastrin level 2.5 minutes after injection. An increase in serum gastrin by at least 200 pg/ml supports the diagnosis of gastrinoma.[17] Performed and interpreted in this way, the secretin injection test appears to offer a rapid, safe and reliable means for establishing or excluding the diagnosis of ZES.[16-18]

Pure GIH secretin (Studsvik, Sweden. Distributed by Kabi Group Inc., One Lafayette Pl., P.O. Box 1165, Greenwich, CT 06830.) is preferred over Boots secretin (Columbus, Ohio) in the performance of the secretin injection test.[17] This is because (1) different preparations of Boots secretin vary in potency; (2) 1 U of GIH secretin is approximately equivalent to 6 to 8 U of Boots secretin, entailing the use of much larger doses of Boots secretin during testing;[17] and (3) Boots secretin may be contaminated with gastrin.[19]

The association of ZES and nonpancreatic endocrine tumors has been described as part of a clinical syndrome termed multiple endocrine neoplasia-type 1 (MEN-1). Pancreatic islet cell tumors, pituitary tumors and hyperparathyroidism are the most frequent manifestations of the MEN-1 syndrome. It has been recommended that all patients with ZES undergo evaluation for MEN-1.[3, 4, 20]

Treatment of ZES

The treatment of ZES has changed drastically in the last few years. With the advent of H2-histamine receptor antagonists, pharmacologic control of acid secretion has become an important therapeutic option and is the preferred initial treatment of ZES in many patients.[4, 21-28] The standard treatment of ZES has traditionally been surgical, with total gastrectomy being the procedure of choice.[1, 4, 10, 22] Total gastrectomy was favored palliation in ZES since most gastrinomas were unresectable and because this operation is effective in controlling symptoms and ulcer-related complications of ZES. However, total gastrectomy is associated with significant mortality (5% to 10%) and morbidity. Subtotal gastric resection in ZES is not done because it is usually followed by recurrent ulcer disease necessitating reoperation. Blind pancreaticoduodenectomy is not done because of high mortality and morbidity.

Since about 10% of patients with ZES have a surgically curable tumor located in the duodenal wall or in the tail of the pancreas,[4, 10, 29] search for such a lesion should be considered. Reasonable investigative studies would include upper gastrointestinal endoscopy and/or hypotonic duodenography, abdominal ultrasonography or computed tomography, and selective arteriography.[4] A radionuclide liver scan can be done to look for hepatic metastases. Preoperative localization tests have not been found to be particularly helpful in some series.[6] Localization of gastrinomas by transhepatic portal vein catheterization and gastrin assay has been recently reported[30] and may prove useful in the selection of curative operative treatment in some patients, but requires further study.[31]

Diagnostic laparotomy in search of a curable gastrinoma is a controversial issue. Some recommend diagnostic laparotomy even if localization tests are negative[21, 32] to provide histologic proof of diagnosis and give the patient with a potentially curable gastrinoma the opportunity (even though small) to be free permanently from the risk of death from acid-peptic complications or progression of neoplasm and to avoid life-long medical therapy with the possibility of undesirable side effects. Even in patients with incurable gastrinomas, removal of accessible tumor may be of palliative therapeutic benefit.[21, 32] However, others believe that because of the small likelihood of finding a curable lesion in a patient with negative preoperative localization tests, that routine exploratory laparotomy is not justified except, perhaps, in young patients or in those in whom the disease cannot be controlled medically.[22] Ultimately, the decision to perform diagnostic laparotomy in an individual patient requires consideration of the clinical circumstances, the age of patients and their wishes and the presence of other medical conditions.

In most patients, pharmacologic suppression of acid secretion is the preferred initial treatment of ZES.[4, 21, 22] Cimetidine is usually started at 300 mg four times daily (with meals and at bedtime, roughly at 6-hour intervals), but some patients may require up to 600 mg every four hours along with anticholinergics.[4] Medical therapy often requires careful attention to dosage and administration. Dose requirements may change in individual patients with progression of disease. Newer H2-histamine receptor antagonists should prove useful in ZES and, perhaps, may simplify dosage regimens. Drug efficacy can be monitored by following symptoms, gastric secretory studies and 24-hour intragastric pH measurement. One investigator says that suppression of BAO to 10 meq per hour, from the second to the sixth hour after oral cimetidine, has been associated with clinical control of ZES.[33]

In some situations, total gastrectomy still plays an important palliative role in the management of acid-peptic disease in ZES. Total gastrectomy is indicated in patients who respond inadequately to cimetidine or who "escape" from an initially satisfactory response, who are unwilling or unable to follow rigid, long-term and expensive medical therapy, or who experience unacceptable drug side-effects.

Recently, one group has presented evidence based on a small number of cases that selective proximal vagotomy greatly facilitates control of acid secretion in ZES.[34] They recommend vagotomy and cimetidine rather than cimetidine alone for the management of ZES. Furthermore, such a combined surgical and medical approach allows discovery and removal of curable gastrinomas and resection of all gross tumor. Additional patients must be treated this way to confirm the efficacy of this form of therapy.

Both total gastrectomy and cimetidine treat only the consequences of gastrinoma and do not alter progressive tumor growth which is the most frequent cause of death in these patients. Late in the disease course of ZES, patients often have complications directly related to metastatic tumor. Cytotoxic chemotherapy offers promise for the future, but its role at present in ZES is uncertain. At present, it should probably be reserved for patients with bulky symptomatic tumors. Streptozotocin has been shown to cause regression in tumor size and improved survival in some series. Trials employing combination chemotherapy are underway.

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"People's lifestyles are going to have to change . . . this throw-away society's days are numbered." — LESTER BROWN, Director of Worldwatch Institute

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Cancer Mortality Excess in Counties of Missouri

RECENT STUDIES by Mason *et al*[1, 2] determined age adjusted cancer mortality rates for the contiguous U.S. for the period 1950-1969. Variations in cancer mortality by geographic location were quite striking. Color coded maps were used to identify cancer mortality "hot spots" and to encourage the investigation of specific cancers in counties with excessively high rates. During 1950-1969, cancer mortality rates in Missouri were significantly elevated for a number of sites. For example, cancer of the colon in white men was elevated in St. Louis County and St. Louis City. Cancer of the lung was elevated for white men in St. Louis City, Jackson County and Jasper County. Cancer of the lung in white women was elevated in Jefferson County. This paper presents the highlights of recalculating the cancer mortality rates in Missouri for a more recent time period. The principal aim is to assess which cancer sites and counties remained consistently significantly high.

MATERIALS AND METHODS

Cancer mortality rates were calculated for 16 cancer sites for each of the 115 counties in Missouri and for 21 cancer sites for each of the 13 county groups. These county groups are the same as the U.S. Bureau of Economic Analysis' State Economic Areas (SEA); namely, one county or a group of contiguous counties with similar economic and social characteristics (Table 1). The basis for grouping sites according to either individual county or county group was to provide consistency with the 1950-1969 study by Mason *et al*. The same boundaries were used for county groups as in Mason's study.

The data was restricted to white male and female residents of Missouri. Age, sex and race specific mortality rates were calculated using 18 age categories (0-4, 5-9 . . . 75-79, 80-84, and 85 and over). The population chosen for the denominator of the specific rates was obtained either from the 1970 U.S. Census (for the 1968-1972 deaths) or from a 1975 U.S. census bureau estimate (for the 1973-1977 deaths) made available by the National Cancer Institute. The three digit death coding format for underlying cause of death was based on the International Classification of Diseases Adapted for Use in the United States, Eighth Revision (ICDA-8)[3] after checking for comparability with ICDA-6 used by Mason *et al*.

Age adjusted mortality rates were calculated using the direct method of applying age, sex, race and site specific county and county group rates to the total 1960 U.S. population (all races, sex specific) (Colton, 1974).[4] Rates were rank ordered for each county or county group for each ICDA code number. If the rate for a county (or county group) minus two standard deviations did not overlap with the state rate plus two standard deviations, a statistically significant ($p<0.05$) elevated rate was indicated. The method used was generally the same as that of Mason (Chiang, 1961).[5]

For each county and county group, comparisons were also made to the 1960 age adjusted U.S. rate using 1973-1977 deaths. Standard deviations for the 1973-1977 U.S. mortality rates are not yet available. Hence, state standard deviations were used as a substitute for U.S. standard deviations when comparison was made to elevated county or

An analysis of cancer mortality for white residents of Missouri was completed for 115 counties and 13 county groups for the periods of 1968-1972 and 1973-1977. Comparison was made to previously published results (NCI, 1950-1969). This article presents the highlights of recalculating the cancer mortality rates in Missouri for the more recent time period. The goal is to access which cancer sites and counties remained consistently and significantly high.

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TABLE 1
LISTING OF COUNTY GROUPS, INCLUDING FEDERAL COUNTY IDENTIFICATION CODES, MISSOURI

1. Greene (077)
2. Clay (047), Jackson (095)
3. St. Charles (183), St. Louis (189), St. Louis City (510), Jefferson (099)
4. Perry (157), Ste. Genevieve (193), Cape Girardeau (031), Bollinger (017)
5. Jasper (097), Newton (145), McDonald (119), Lawrence (109), Barry (009)
6. Moniteau (135), Cole (051), Osage (151), Gasconade (073), Franklin (071), Warren (219)
7. Butler (023), Stoddard (207), Scott (201), Mississippi (133), New Madrid (143), Dunklin (069), Pemiscot (155)
8. Dent (065), Shannon (203), Oregon (149), Iron (093), Reynolds (179), Carter (035), Ripley (181), St. Francois (187), Madison (123), Wayne (223)
9. Atchison (005), Nodaway (147), Holt (087), Andrew (003), Buchanan (021), Platte (165), Clinton (049), Ray (177), Lafayette (107), Carroll (033), Saline (195)
10. Cass (037), Bates (013), Vernon (217), Barton (011), Johnson (101), Henry (083), St. Clair (185), Cedar (039), Dade (057), Pettis (159), Cooper (053)
11. Benton (015), Hickory (085), Morgan (141), Camden (029), Laclede (105), Miller (131), Pulaski (169), Maries (125), Phelps (161), Crawford (055), Washington (221)
12. Polk (167), Dallas (059), Webster (225), Wright (229), Texas (215), Christian (043), Douglas (067), Stone (209), Taney (213), Ozark (153), Howell (091)
13. Worth (227), Gentry (075), DeKalb (063), Harrison (081), Daviess (061), Caldwell (025), Mercer (129), Grundy (079), Livingston (117), Putnam (171), Sullivan (211), Linn (115), Chariton (041), Schuyler (197), Adair (001), Macon (121), Randolph (175), Howard (089), Scotland (199), Knox (103), Shelby (205), Monroe (137), Boone (019), Audrain (007), Callaway (027), Clark (045), Lewis (111), Marion (127), Ralls (173), Pike (163), Lincoln (113), Montgomery (139)

county group rates.

Counties with elevated rates in 1950-1969 were compared with the results for 1968-1972 and 1973-1977 to see if they remained consistently high for the same cancers.

RESULTS

The consistently elevated cancer sites in Missouri were for total and colon cancer in men in St. Louis County and St. Louis City and for lung cancer in men in Jasper County and St. Louis City. Colon cancer rates were elevated 45% in St. Louis County and 32% in St. Louis City during 1973-1977. The colon cancer rates are based on 510 and 261 deaths, respectively. Lung cancer rates were elevated 56% in St. Louis City and 42% in Jasper County. Cancer of the lung in men was no longer significantly elevated in Jackson County. No continuing excess was found for women.

Table 2 shows the age adjusted lung cancer mortality rates for white men in selected Missouri counties. Excess rates can be seen for St. Louis City and Jasper County in 1973-1977. The rate change in Jasper County is similar to that for Boone and Buchanan Counties but slightly greater than that for the state. Boone and Buchanan counties were selected because they had a similar total population to Jasper's in 1970, and the men were not involved in mining. Boone County has a large university population while Buchanan County is largely devoted to farming.

Table 3 shows the age adjusted lung cancer mortality rates for women. While the lung cancer rates for women in Jasper County are not statistically significantly elevated, they are now higher than the rates for women in St. Louis City (19.1/100,000 per year vs. 17.2/100,000 per year in 1973-1977) and are increasing 60% faster than the state, 47% faster than the U.S. and 34% to 43% faster than Boone and Buchanan counties. If present trends continue, lung cancer will have passed breast cancer as the leading cause of cancer mortality in women by 1977 in Jasper County. However, lung cancer will not pass breast cancer as the leading cause of cancer mortality in women for the state as a whole until 1985. Thus, the Jasper County cross-over point occurs eight years earlier than does the state.

Jasper County ranks ninth in population in Missouri out of 115 counties, having a 1970 white population of 78,736. The average Missouri county population is 36,439, with a range from 3,353 to 903,811. The white population of Boone County numbered 76,295 in 1970. The largest city is Columbia. Buchanan County, which includes St. Joseph, had a white population of 84,263 in 1970. St. Louis County ranked first in 1970 with a white population of 903,811. St. Louis City ranked third with a white population of 362,641. Jackson County ranked second, with a white population of 537,991.

Cancers nonsignificantly elevated in Missouri for 1968-1977 but were significantly elevated in 1950-1969 can be found in Table 4. These include rectal cancer in males, which is elevated nonsignificantly in St. Louis City by 38%. This rate is based on 81 deaths. Lung cancer is elevated 7% in Jackson County, based on 846 deaths. For women, lung cancer is nonsignificantly elevated 2% in Jefferson County (39 deaths) and cancer of the cervix uteri is elevated 121% in Pemiscot County (seven deaths) and 93% in Dunklin County (nine deaths).

TABLE 2
AGE ADJUSTED[a] LUNG CANCER[b] RATES IN SELECTED MISSOURI COUNTIES FOR WHITE MALES: 1950-1969, 1968-1972 and 1973-1977

	1950-1969		*1968-1972*		*1973-1977*		
County of Residence	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Percent Change in the Average Annual Death Rate Over 15 Years*
Jasper	409	47.2*	161	72.8	190	88.0*	86.4
St. Louis City	3,502	54.4*	1,006	84.3	935	96.6*	77.6
St. Louis	2,257	43.2	1,068	59.0	1,220	61.4	42.1
Jackson	2,336	44.7*	843	64.9	846	66.9	49.7
Boone	127	30.7	69	59.3	77	57.7	87.9
Buchanan	414	39.3	166	68.3	175	73.0	85.8
State	15,935	37.3	6,536	58.3	7,472	65.0	74.3
U.S.	571,226	38.0	N/A	N/A	285,127	62.3	63.9

[a] Total 1960 U.S. population (all races and sexes combined).
[b] 8th Revision ICDA: Code 162. 6th Revision ICDA: Code 162, 163.
*County rate significantly elevated ($p<0.05$) above U.S. rate.
N/A Not Available.

Certain cancer sites have increased in 1973-1977 to become statistically significantly elevated where previously they were not. These can be found in Table 5. There is a 295% excess in kidney cancer in male subjects in New Madrid County, which borders on the Mississippi River. However, this rate is based on only nine deaths. In addition, brain cancer in men is elevated over three-fold in Perry County (eight deaths). On the other hand, cancer of the lung in men is elevated 21% in Jefferson County (163 deaths), 44% in Pemiscot County (49 deaths), and 47% in Dunklin County (86 deaths). For women, cancer of the corpus uteri is elevated 594% in Putnam County (eight deaths) and rectal cancer is elevated 37% (116 deaths) in St. Louis County. It should be

TABLE 3
AGE ADJUSTED[a] LUNG CANCER[b] RATES IN SELECTED MISSOURI COUNTIES FOR WHITE FEMALES: 1950-1969, 1968-1972 and 1973-1977

	1950-1969		*1968-1972*		*1973-1977*		
County of Residence	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Number of Deaths*	*Average Annual Death Rate Per 100,000*	*Percent Change in the Average Annual Death Rate Over 15 Years*
Jasper	73	6.2	40	12.1	61	19.1	208.1
St. Louis City	564	6.6	235	13.1	253	17.2	160.6
St. Louis	458	7.2	280	11.8	428	16.1	123.6
Jackson	452	6.8	215	12.0	285	16.1	136.8
Boone	29	5.2	16	8.7	22	13.3	155.8
Buchanan	73	5.5	37	12.5	43	13.5	145.5
State	2,965	5.9	1,470	10.5	1,957	13.6	130.5
U.S.	108,326	6.3	N/A	N/A	86,455	15.2	141.3

[a] Total 1960 U.S. population (all races and both sexes combined).
[b] 8th Revision ICDA: Code 162. 6th Revision ICDA: Code 162, 163.
N/A Not Available.

TABLE 4
NONSIGNIFICANTLY ELEVATED CANCER SITES IN MISSOURI

Sex	*Site*	*County or County Group (SEA)*	*1973-1977 Ratio of Mortality Rates (age adjusted, all races, sex specific) County/U.S.*
Male	Total	Jackson	1.04 (2,567)*
	Rectum	St. Louis City	1.38 (81)
	Lung	Jackson	1.07 (846)
	Other and unspecified	Sullivan	1.50 (6)
		Daviess	1.09 (4)
	Prostate	Lafayette	1.13 (20)
		Harrison	1.26 (12)
	Lip	SEA 5	2.40 (2)
		SEA 7	5.60 (3)
	Other mouth and throat	SEA 3	1.02 (157)
	Esophagus	SEA 3	1.01 (142)
	Other skin	SEA 7	1.45 (7)
	Lymphosarcoma & reticulosarcoma	SEA 1	1.09 (25)
Female	Stomach	Putnam	3.66 (6)
	Colon	Clinton	1.02 (11)
		Clark	1.26 (7)
	Liver	Washington	1.64 (3)
		Stoddard	1.65 (6)
	Lung	Jefferson	1.02 (39)
	Other and unspecified	Stoddard	1.46 (14)
		Wayne	2.68 (9)
		Butler	1.70 (17)
		Linn	2.04 (16)
		Pemiscot	1.43 (10)
	Cervix Uteri	Pemiscot	2.21 (7)
		Dunklin	1.93 (9)
		Butler	1.47 (7)
		Howell	2.74 (6)
	Corpus Uteri	Monroe	1.39 (2)
		Grundy	1.56 (4)
		Daviess	2.67 (4)
	Ovary	St. Louis City	1.11 (149)
	Eye	SEA 6	1.20 (1)

*Numbers in parenthesis refer to the frequency of deaths during 1973-1977 in each County or County Group.

recognized that a small number of cases will lead to some instability in rates. Some of the excess in Table 5 could be the result of statistical flukes.

DISCUSSION

The only consistently high statistically significant mortality rates found in Missouri during both 1950-1969 and 1968-1977 are (a) total and colon cancer in male subjects in St. Louis County and St. Louis City and (b) lung cancer in male subjects in Jasper County and St. Louis City.

With regard to the lung cancer excess in Jasper County, rates in women are rising much faster than expected. This is an analogous situation to Cherokee County, Kan., which is across the border from Jasper County and which was analyzed in a separate study.

Possible risk factors among whites for colon cancer (other than increasing age) include (Fraumeni)[6] foods low in fiber and high in animal protein and fat, nitrosamines, ulcerative colitis, vitamin A deficiency, familial multiple adenomatous polyposis coli, hereditary non-polyposis coli (cancer family syndrome) and hereditary site specific colon cancer. Immigrants from Ireland may be at higher risk.

Lung cancer is the most common tumor related to an airborne environmental determinant. Possible risk factors include cigarette smoking, pulmonary fibrosis (e.g., scarring from tuberculosis),

TABLE 5
NEWLY SIGNIFICANT ELEVATED CANCER SITES IN MISSOURI

Sex	*Site*	*County or County Group (SEA)*	*1973-1977 Ratio of Mortality Rates (age adjusted, all races, sex specific) County/U.S.*
Male	Total	Buchanan	1.21 (571)*
		Jasper	1.20 (509)
		St. Charles	1.12 (358)
	Lung	Dunklin	1.47 (86)
		Jefferson	1.21 (163)
		Pemiscot	1.44 (49)
	Kidney	New Madrid	3.95 (9)
	Brain	Perry	4.19 (8)
	Other and unspecified	Jackson	1.41 (194)
		St. Louis City	1.49 (154)
		Cass	2.06 (20)
		Pulaski	2.46 (12)
Female	Total	St. Louis	1.08 (3,669)
	Colon	Saline	1.79 (30)
	Other and unspecified	Barry	2.48 (18)
		Dent	2.69 (11)
	Corpus Uteri	Putnam	6.94 (8)
	Rectum	St. Louis	1.37 (116)

*Numbers in parentheses refer to the frequency of deaths during 1973-1977 in each County or County Group.

arsenic, asbestos, cadmium and uranium (radon daughters).

Unlike the 1950-1969 NCI study, this investigation used Code 162 for lung cancer and did not include Code 163. Code 163 is unspecified as to primary or secondary site in the sixth revision. There is good comparability in death certificate coding for primary site lung cancer between the time periods studied. The population used herein was that estimated for 1975, not the sum of the 20 year's population used by NCI. The principal method of age adjustment used herein was sex specific, although when comparison was made to Mason's data both sexes were combined.

It would be useful to obtain the 1973-1977 cancer rates needed to qualify each site to be in the top 10% nationally. Although such rates have been calculated herein for Missouri, they are not readily available for the entire U.S. The acquisition of national standard deviations for the period 1973-1977 would also be desirable. The use of Missouri's state standard deviation as a substitute may create false negatives.

The approach used in this study to find statistically significant elevation by site is a conservative one. Cancer sites remaining statistically significant in both time periods, ($p<0.05$ in both 1950-1969 and 1973-1977 equals $p<0.05^2$, or $p<0.0025$, assuming independence) are considered to be of highest priority for further investigation. However, this method is probably not the most useful one for identifying excesses of the rarest tumors since deaths over a five-year period may yield too few cases in a given county or county group, resulting in a large standard deviation.

One might question the degree to which a cancer mortality rate excess in this study is a reliable indicator of an incidence rate excess. Incidence data is preferred because it is a better measure of risk than mortality, particularly for cancers with a low case fatality rate. However, Missouri does not have verified incidence data available for the entire population of the state. In a separate study, comparisons of mortality with incidence in Iowa, which has a statewide cancer registry, revealed some congruence for lung, colon and total cancer. Considerable caution needs to be exercised, however, in extrapolating Iowa's results to any other state, including Missouri.

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Acknowledgement: This project was supported in part by the Mid-America Cancer Center at the University of Kansas School of Medicine, the American Cancer Society (Grant # IN115), and the U.S. Environmental Protection Agency, Region VII (Contract # K0575NTEX). Thomas J. Mason, Ph.D., Head, Population Studies Section, Environmental Epidemiology Branch, National Cancer Institute, provided mortality data for 1950-1969 and population data for 1970-1975. Missouri mortality data for 1968-1977 was provided by Garland Land, Director, Missouri Center for Health Statistics, Missouri Department of Social Services.

Rectal Carcinoma

(Continued from page 144)

Sishy *et al* has treated 39 patients for cure since 1973.[11] The treatment failed in only two of these. One of these patients had an anaplastic lesion and later received a successful abdominoperineal proctectomy. Sishy has also used this method for palliative treatment and reports good local control in 68% of such cases. These results obviously compare favorably with long term results following abdominoperineal resection of the rectum.

SUMMARY

Intracavitary irradiation has been proven to be a useful modality for treatment of selected cases of carcinoma of the rectum. Rectal cancers selected for cure should be well differentiated or moderately well differentiated histologically and limited to the rectal wall. Anaplastic and colloid tumors cannot be satisfactorily treated by this method. The tumor size should not exceed 3 cm x 5 cm. Advantages of intracavitary irradiation include (1) avoidance of permanent colostomy, (2) avoidance of operation, (3) treatment on an ambulatory basis, (4) minimal side effects, (5) excellent control of the tumor and (6) availability of subsequent radical operation if this treatment fails.

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WARNINGS: The safety of this preparation during pregnancy and lactation has not been established. Use of this drug requires that the physician evaluate the potential benefits of the drug against any possible hazard to the mother and child.

PRECAUTIONS: Although there are no absolute contraindications to pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold or a focal brain lesion. Caution should be exercised when treating patients with high doses of Ru-Vert who have heart disease. While pentylenetetrazol does not act directly on the myocardium, the results from central vagal stimulation could cause bradycardia.

Pheniramine maleate, like other antihistamines, may produce sedative side effects in certain patients.

Transient vasodilatation due to rapid absorption of nicotinic acid may produce facial flushing and a sensation of warmth. These effects may be ameliorated by recommending that Ru-Vert be taken following meals or with food.

ADVERSE REACTIONS: Pentylenetetrazol in high doses may produce toxic symptoms typical of central nervous system stimulants, which act on the higher motor centers and the spinal cord. Convulsions resulting from this drug are spontaneous and are not induced by external stimuli. They usually last for several minutes and are followed by profound depression and respiratory paralysis. Death has been reported from the ingestion of 10 grams of pentylenetetrazol.

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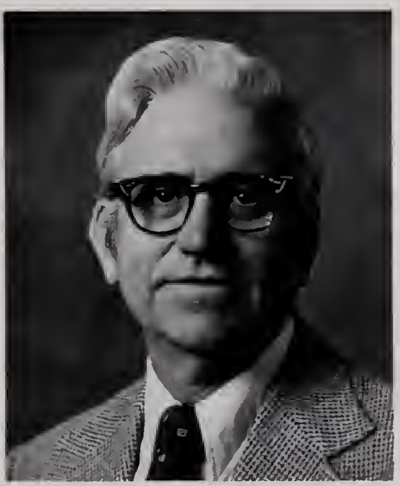
President's Message

Opportunity for health care legislation in Missouri is three fourths over. Once again, we will add up what we as an Association have accomplished. We are complacent and I think the results will show it.

When other practitioners who want to expand their services are expending $1,000 per year from every member of their organizations and we in the MSMA are having great difficulty in getting our members to contribute $100 and when the chiropractors contact every single legislator and we as physicians contact a half dozen, what can we expect in results in good legislation? We, indeed, will get what we deserve in health care legislation. We must wake up and become active.

Our meeting with the nurses (I have spoken of this previously) came off very well, I thought. I feel more dialogue is needed, however, and I hope that it will be continued. I came away with two distinct opinions. First is that the status of the chief nurse in the hospital needs to be elevated to the top executive level. There must be dialogue between physicians and nurses at either the local service or ward level. As a result, we as physicians will be better able to utilize the knowledge that the nurses have of our patients. Second, adjustments must be made in the salaries of nurses, especially in the spread from the beginning to the upper echelon in salaries.



Eugene T. Hansbrough, M.D.

Come to Kansas City to the Annual Convention on April 1-4. Indeed, the House of Delegates is the most democratic organization I know. And, of course, as all physicians should know, you are always welcome to discuss the issues in the reference committees. Don't pass up this opportunity to participate.

MSMA Auxiliary

The Best Has Come Back to Me

As we began this auxiliary year just 12 months ago, my theme for the year was "*Then give to the world the best you have, and the best will come back to you.*"

Throughout the year, I am sure that each county auxiliary has experienced disappointments and successes. In order to have these experiences, we had to give of ourselves. It is this giving of oneself that to me is the real meaning of the auxiliary.

During this year, I have visited all the county auxiliaries in Missouri and have had the opportunity to observe first hand the wonderful projects they accomplish. Whether to gain funds for a worthwhile endeavor, educate students on better health habits, instruct CPR classes, present health education on immunization and child restrains or contact their representatives about a health issue before the legislature, the auxiliary members are there to give of themselves. This is done for many reasons, as varied as our membership.

Mrs. Jerry Meyer
President

While we are working across the state, it is of great benefit to know that we have the cooperation of the MSMA officers, Council and staff. We stand ready to help them in any way possible, but we know that they are there for us when we need assistance. I would especially like to thank Jean Duensing in the MSMA office for all her help and encouragement this past year. It has been a privilege to address the MSMA Council and to have their support in any area that was needed.

The new MSMAA president will be Mrs. Sam Gaston of Joplin. I know great things will be accomplished under her skillful leadership.

By giving of oneself in any endeavor, whether successful or not, I feel that we gain as individuals. I have given my best this year, and I can truly say that the best has come back to me.

MSMA Members Receive Physician's Recognition Award

Thirty-two MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of January, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

Jafar Amini, Kansas City
Don L. Andrus, Poplar Bluff
Andres G. Apostol, Monett
Floyd C. Atwell, Kansas City
James E. Bickley, Kansas City
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Continuing Education Coming Events

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
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(816) 276-1339
***Contact:* Alta Bingham**

Mar. 31	Reproductive Endocrinology and Infertility (Alameda Plaza Hotel)
Apr. 1-3	Update in Obstetrics and Gynecology (Alameda Plaza Hotel)
May 6-7	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
June 5	Symposium on Physical Fitness (Crown Center Hotel)
Sept. 24-26	Ozark Chest Conference (Osage House, Lake Ozark. Contact Susan K. Pingleton, M.D. (816) 474-4100)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
***Contact:* Ronald G. Evens, M.D., Director**

Apr. 14	Leroy Sante Lecture by Dr. Benjamin Felson, University of Cincinnati
May 10	City-Wide Radiology Conference — Neuroradiology

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
***Contact:* Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)
3:00 PM — Surgical Rounds
(Every Wednesday and Friday)
4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)
4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)
8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)
7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

***Contact:* David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673 or (314) 454-3873
***Contact:* Loretta Giacoletto, Office of CME**

Apr. 2-5- May 3	Fourth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (Athens, Greece)
Apr. 22	Multiple Systems Trauma: 1982
May 13-14	Ninth Annual Symposium on Obstetrics and Gynecology
May 24-28	Diagnostic Interview Schedule Training; 1982
June 10	Prevention of Hepatitus B Virus Infection With Vaccine and Immunoglobulin

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St. Louis University Medical Center
Continuing Education
3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
***Contact:* John A. Grellner, Director**

Mar. 31- Apr. 1	Recent Advances in Pediatric Health Care-Diagnosis
Apr. 22-23	Symposium on Cardiac Rehabilitation: State of the Art-1982

Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
***Contact:* Richard B. Oglesby, M.D.**

May 16	14th Eye Seminar: Extracapsular Cataract Extraction
Sept. 12	15th Eye Seminar — Surface Correction of Aphakia

Freeman Hospital
1102 W. 32nd, Joplin 64801
(417) 623-2801, Ext. 310
***Contact:* Joy W. Barnett, CME Coordinator**

Apr. 14	Pregnancy Induced Hypertension
Apr. 24	Spring Seminar: Clinical Pulmonary Medicine — Evaluation and Management

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

Mar. 29-30	28th Annual Urology Seminar (Crown Center Hotel, Kansas City)
Apr. 2-4	A Working Conference on Authority, Responsibility and Organization
Apr. 22-23	Fifth Annual Primary Pediatrics for the Primary Physicians
May 7-9	Fifth Annual Missouri Cardiovascular Conference (Tan-Tar-A, Lake Ozark)

Greater Kansas City Radiological Society

Note: 4:00 PM lectures will be held in the Dept. of Diagnostic Radiology, University of Kansas Medical Center, Kansas City, Kan.
6:30 PM lectures will be held at the Alameda Plaza Hotel, Kansas City

Apr. 14	4:00 PM Percutaneous Abscess Drainage 6:30 PM Percutaneous Biopsy Techniques

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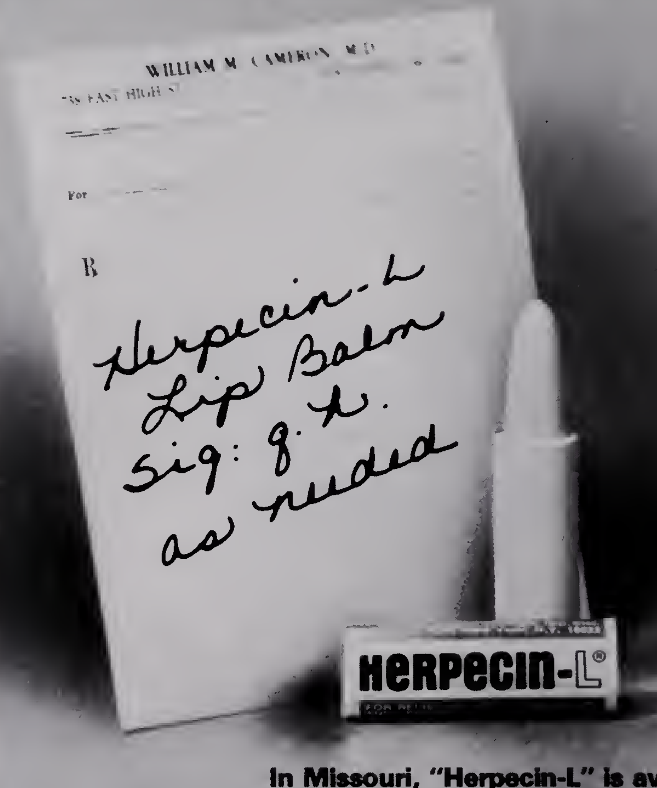

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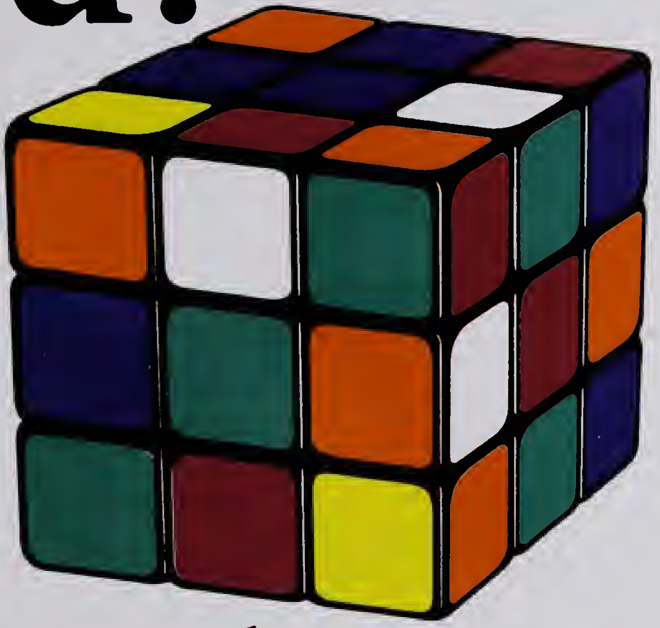

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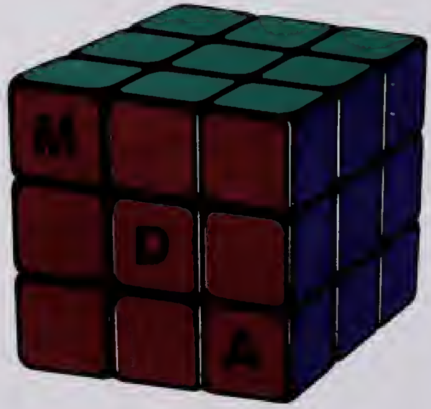

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For your patients' benefit...

BEFORE YOU WRITE
YOUR NEXT ANTIARTHRITIC
PRESCRIPTION,
PLEASE READ
THIS MESSAGE

Boots announces a pharmaceutical first.

TWO WAYS YOUR WILL SAVE MONEY WITH

Introducing

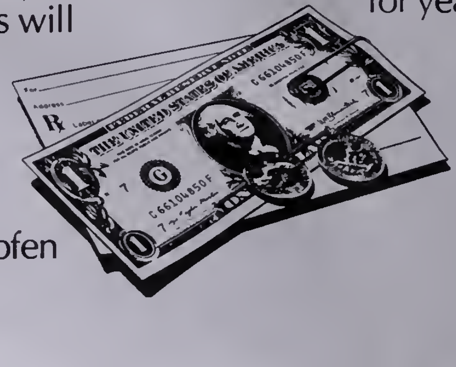
RUFEN® (ibuprofen)

$1.50 REBATE DIRECT TO YOUR PATIENTS ON EVERY PRESCRIPTION OF 100. REFILLS INCLUDED.

One dollar fifty cents returned for every Rebate Coupon your patients mail in.

Every bottle of 100 tablets of RUFEN 400 mg has a Rebate Coupon attached, with full instructions for redemption.

It has already been determined, through public opinion research, that most arthritic patients will appreciate direct rebate savings as much as they appreciate the results of ibuprofen therapy.



AND RUFEN IS PRICED LOWER TO BEGIN WITH.

Boots has already priced RUFEN lower to the wholesaler and the retailer. And if these savings are passed along, as they should be, your patient will receive the benefit of this lower price. Add these savings to the rebate, and your patients receive substantial relief from the costs of a medication many of them may take for years.

RUFEN IS NOT A GENERIC. BOOTS IBUPROFEN IS THE ORIGINAL.

And if you wish, RUFEN may be substituted for Motrin®, because it is bioequivalent.*

Original research by The Boots Company Ltd., of Nottingham, England, developed ibuprofen.

And though we introduced it ourselves elsewhere around the world, we licensed ibuprofen for sale in the United States.

Motrin® (ibuprofen) is a registered trademark of The Upjohn Company.

ARTHRITIC PATIENTS IBUPROFEN THERAPY.

You first came to know it as Motrin (ibuprofen), manufactured by Upjohn.

Now, as we have established facilities in America, we hope you'll come to know Boots brand name for ibuprofen as RUFEN.

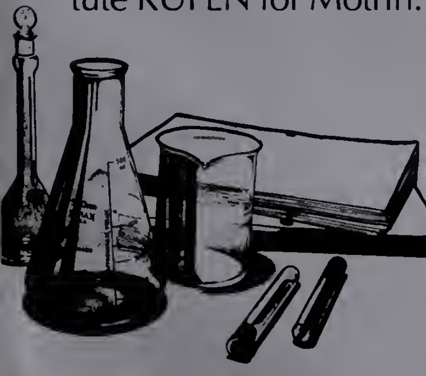
BIOEQUIVALENCY? OF COURSE.*

That's why you may substitute RUFEN for Motrin.

ALSO: A BOOTS CONTRIBUTION TO ARTHRITIS RESEARCH WITH EVERY REBATE.†

A 25¢ contribution per rebate is built directly into the RUFEN program. And with thousands of prescriptions anticipated for RUFEN 400 mg each year, the annual potential for arthritis research is enormous.

RUFEN®
(IBUPROFEN)
Each tablet contains:
IBUPROFEN 400
100 TABLETS
Caution Federal law
dispensing without
Manufactured by
The Boots Company Ltd.
Nottingham, England



Rufen®
(ibuprofen)

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*Data on file.

†Contributions made to: International League Against Rheumatism.

WHEN YOU'RE WRITING YOUR NEXT PRESCRIPTION FOR IBUPROFEN, PLEASE REMEMBER:

RUFEN® OFFERS A $1.50 REBATE DIRECT TO YOUR PATIENTS ON EVERY BOTTLE OF 100 TABLETS OF RUFEN 400 MG.

RUFEN COSTS YOUR PATIENTS LESS TO BEGIN WITH.

RUFEN CONTRIBUTES 25¢ PER REBATE TO ARTHRITIS RESEARCH.

RUFEN IS NOT A GENERIC . . . BOOTS IBUPROFEN IS THE ORIGINAL.

RUFEN (IBUPROFEN) IS BIOEQUIVALENT TO MOTRIN® (IBUPROFEN).*

I hope we've given you several good reasons to remember RUFEN the next time you prescribe ibuprofen.

If we haven't, or if you'd like to know more about Boots Pharmaceuticals or this program, please don't hesitate to drop me a line. Or call us directly at our toll-free number: (800) 551-8119. Louisiana residents, call (800) 282-8671.

To ensure that your patients receive the benefits of the Rufen program, *be sure to specify* "D.A.W.," "No Sub," or "Medically Necessary," as required by the laws of your state.

Sincerely,

John D. Bryer, President
Boots Pharmaceuticals, Inc.

Boots Pharmaceuticals, Inc.
6540 LINE AVENUE, SHREVEPORT, LOUISIANA 71106

Pioneers in medicine for the family

*Data on file.

5/81

RF-009

RUFEN®
(ibuprofen/Boots)

(For full prescribing information, see package brochure.)

RUFEN® Tablets
(ibuprofen)

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally; however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS

Incidence greater than 1%

Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4% to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). **Central Nervous System:** dizziness*, headache, nervousness. **Dermatologic:** rash* (including maculopapular type), pruritus. **Special Senses:** tinnitus. **Metabolic:** decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** depression, insomnia. **Dermatologic:** vesiculobullous eruptions, urticaria, erythema multiforme. **Special Senses:** amblyopia (see PRECAUTIONS). **Hematologic:** leukopenia, decreased hemoglobin and hematocrit. **Cardiovascular:** congestive heart failure in patients with marginal cardiac function, elevated blood pressure.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** paresthesias, hallucinations, dream abnormalities. **Dermatologic:** alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** hemolytic anemia, thrombocytopenia, granulocytopenia bleeding episodes. **Allergic:** fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** gynecomastia, hypoglycemia. **Cardiovascular:** arrhythmias (Sinus tachycardia, bradycardia, and palpitations). **Renal:** decreased creatinine clearance, polyuria, azotemia.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain. Do not exceed 2,400 mg per day.

CAUTION: Federal law prohibits dispensing without prescription.

Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

COMMERCIAL EXHIBITORS LIST

124th MSMA Annual Session April 1-4, 1982 Hyatt Regency Hotel, Kansas City

Booth	*Exhibitors*
55	Accounts Receivable Management Corporation St. Louis, Missouri
1	Allergy and Immuno Diagnostics, Ltd. Kansas City, Missouri
50	Ames Division, Miles Laboratories, Inc. Elkhart, Indiana
52	Antigen Laboratories, Inc. Liberty, Missouri
48	Bates Buttons — Meridian Medical Group Indianapolis, Indiana
4	Biomedical Reference Labs, Inc. Burlington, North Carolina
7	Blue Shield of Kansas City Blue Shield of St. Louis Kansas City, Missouri
41	Boots Pharmaceuticals Shreveport, Louisiana
33	Ciba Pharmaceutical Company Arlington, Texas
36	Data Service Agency, Inc. Maryland Heights, Missouri
15	Dorsey Laboratories East Hanover, New Jersey
34	Encyclopaedia Britannica Chicago, Illinois
14	Forrest T. Jones and Company, Inc. Kansas City, Missouri
30	Fred S. James & Company of Missouri, Inc. Kansas City, Missouri
5	Geigy Pharmaceuticals Edina, Minnesota
27	General Data Systems St. Louis, Missouri
23	Glaxo, Inc. Ft. Lauderdale, Florida
18	International Clinical Labs, Inc. St. Louis, Missouri
6	International Medical Electronics, Ltd. Kansas City, Missouri
20	The Key Company St. Louis, Missouri
16	R. J. Legere & Company, Inc. Scottsdale, Arizona
8	Med-Equip-Co. Columbia, Missouri
28	Medical Defense Associates, Ltd. Springfield, Missouri
12	The Medical Protective Company Fort Wayne, Indiana
46	MEDICOMP Valley Center, Kansas
47	Merck Sharp & Dohme West Point, Pennsylvania
26	METPATH, INC. Des Plaines, Illinois
24	Mid-America Computing, Inc. Shawnee Mission, Kansas
13	Midwest Organ Bank Kansas City, Missouri
25	Missouri Division of Health Bureau of Prevention of Mental Retardation Jefferson City, Missouri
19	Missouri Medical Insurance Company St. Louis, Missouri
60	Missouri Pork Producers Association Boonville, Missouri
22	Organon Pharmaceuticals West Orange, New Jersey
61	Para Medical Distributors Kansas City, Missouri
29	PEBSCO Jefferson City, Missouri
21	Roche Laboratories Nutley, New Jersey
45	William H. Rorer, Inc. Fort Washington, Pennsylvania
11	Rowell Laboratories, Inc. Baudette, Minnesota
3	W. B. Saunders Company Shawnee Mission, Kansas
54	SBAA Marketing, Inc. Cape Girardeau, Missouri
10	Searle Laboratories Chicago, Illinois
62	SmithKline Clinical Labs, Inc. St. Louis, Missouri
2	Smith Kline & French Laboratories Philadelphia, Pennsylvania
49	Social Security Administration Kansas City, Missouri
17	Southern Medical Association Birmingham, Alabama
51	Summit Medical Lee's Summit, Missouri
43	SYCOM Madison, Wisconsin
44	Syntex Laboratories Palo Alto, California
31	The Upjohn Company Kansas City, Missouri
32	Upjohn Healthcare Services St. Louis, Missouri
35	U. S. Air Force Kansas City, Missouri
9	US Army Medical Department Washington, D.C.
40	Wallace Laboratories Cranbury, New Jersey

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Bristol Laboratories
Syracuse, New York

Eli Lilly and Company
Indianapolis, Indiana

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...another well-known pair that works so well together! Ninety-five percent of colon/rectal surgeons surveyed added Tucks pads concomitantly to hemorrhoidal treatment programs they recommended.*

TUCKS
PARKE-DAVIS
Anusol-HC®
Rectal Cream with Hydrocortisone Acetate
ANUSOL-HC

Anusol-HC®

Suppositories/Cream with Hydrocortisone Acetate

*The #1 physician-prescribed product for hemorrhoids and other common anorectal disorders***

☐ *Antiinflammatory, to relieve edema, burning, itching, pain*

☐ *Astringent, to help promote healing*

☐ *Emollient, for easier bowel movements and soothing relief of local trauma*

And, when pain is a special problem, Anusol Ointment offers the benefits of the anesthetic, pramoxine HCl.

TUCKS®

Pre-Moistened Hemorrhoidal/Vaginal Pads

The #1 hemorrhoidal pad† for added external relief and gentle cleansing of fecal residue

☐ *Soothes, cools, comforts the irritation and itch of hemorrhoids and other common anorectal disorders*

☐ *Hygienic rectal wipe—an integral part of the anorectal regimen*

Once pain and inflammation subside, for dual action recommend regular ANUSOL®—to maintain patient comfort—and TUCKS®—to maintain patient anorectal hygiene.

**Meeting of Am Soc Colon/Rectal Surgeons, May 1980.*

***Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.*

†1981 data from leading marketing research organization.

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Warner-Lambert Company
Morris Plains, NJ 07950

WARNER LAMBERT

PD-85-JA-0867-P-1 (2-82)

ANUSOL-HC® Suppositories/ ANUSOL-HC® Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

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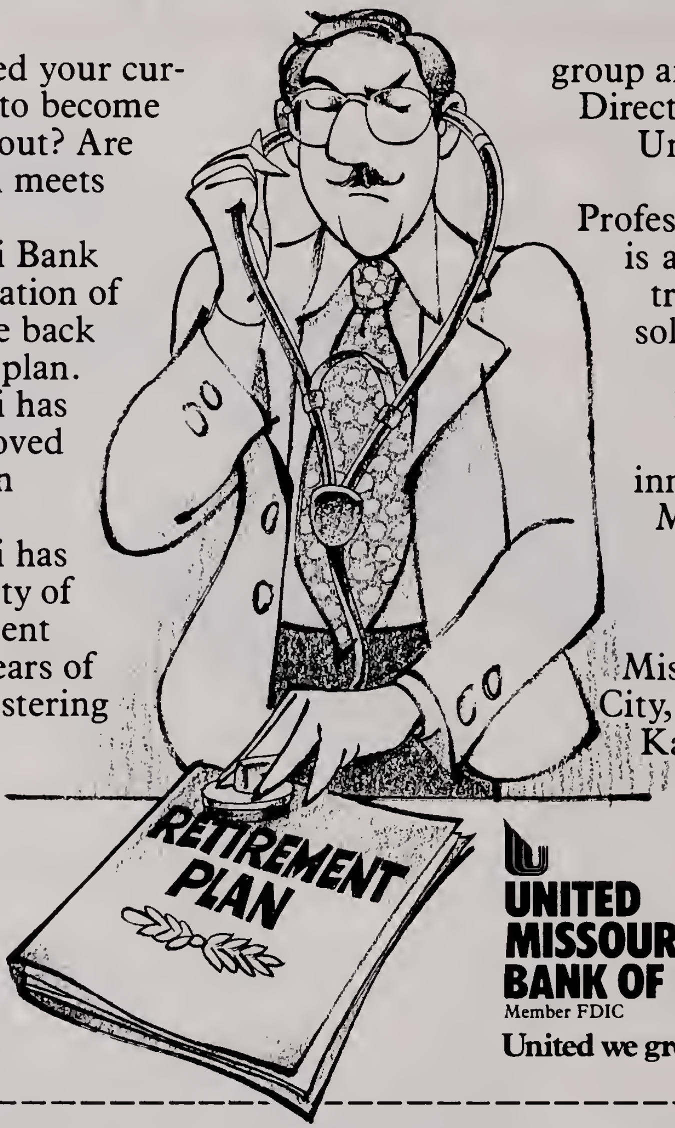

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New Members

Elizabeth A. Andes, M.D., 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Andes is a native of Independence, received her preliminary education at the University of Kansas and her M.D. degree at the University of Kansas in 1978. She specializes in internal medicine.

Charles N. Abromovich, M.D., 1502 E. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Abromovich is a native of St. Louis, received his preliminary education at the University of Missouri-St. Louis and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in pediatrics.

Michael R. Caughron, M.D., 2316 E. Meyer Blvd., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Caughron is a native of Manhattan, Kan., received his preliminary education at Kansas State University and his M.D. degree at Kansas University in 1973. He specializes in pathology.

Ramona Marie Chapman, M.D., St. Johns Regional Oncology Center, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Chapman is a native of Columbus, Ky., received her preliminary education at Memphis State University and her M.D. degree at the University of Tennessee in 1970. She specializes in internal medicine, hematology and oncology.

Ronald W. Cygan, M.D., 373 W. 101st Terr., Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Cygan is a native of Chicago, Ill., received his preliminary education at Loyola University and his M.D. degree at Tulane University in 1972. He specializes in pediatrics.

Donna Kathryn Daily, M.D., The Children's Mercy Hospital, 24th and Gillham Rd., Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Daily is a native of Dodge City, Kan., received her preliminary education at Kansas State University and her M.D. degree at the University of Kansas in 1972. She specializes in pediatrics.

Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

William J. Dickerson, M.D., Rt. 1, Box 188-18, Osage Beach 65065, has become a member of the Lake of the Ozarks Medical Society. Dr. Dickerson is a native of Butte, Neb., received his preliminary education at Hastings College and his M.D. degree at the University of Nebraska in 1946. He specializes in internal medicine.

Shripad Sitaram Hegde, M.D., 6700 Troost, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Hegde is a native of Sirsi, India, received his preliminary education at G. S. Science College and his M.D. degree at Karnataka Medical College in 1973. He specializes in internal medicine and cardiology.

Richard J. Hendershot, M.D., 6400 Prospect, Suite 142, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Hendershot is a native of Columbus, Ohio, received his preliminary education at Capital University and his M.D. degree at Ohio State University in 1971. He specializes in anesthesiology.

Paul Leon LaBrie, M.D., 17221 E. 23rd, Independence 64057, has become a member of Jackson County Medical Society. Dr. LaBrie is a native of Hartford, Conn., received his preliminary education at Duquesne University and his M.D. degree at the University of Pennsylvania in 1976. He specializes in general surgery.

Walter J. Levy, Jr., M.D., 628 Huntridge Ct., Columbia 65201, has become a member of Boone County Medical Society. Dr. Levy is a native of Columbia, received his preliminary education at Duke University and his M.D. degree at the Medical College of Georgia in 1973. He specializes in neurological surgery.

Joseph Mariano, M.D., 1511 Christy Dr., Jefferson City 65101, has become a member of Boone County Medical Society. Dr. Mariano is a native of New York, N. Y., received his preliminary education at Brooklyn College and his M.D. degree at Temple University in 1978. He is in general practice.

Peter H. Mested, M.D., Suite 142, 6400 Prospect Ave., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Mested is a native of Long Beach, Calif., received his preliminary education at the University of California-Los Angeles and his M.D. degree at the University of California-Los Angeles in 1973. He specializes in pediatrics and anesthesiology.

John L. Morgan, M.D., 2913 Lynnwood Dr., Columbia 65201, has become a member of Boone County Medical Society. Dr. Morgan is a native of Chillicothe, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1980. He specializes in radiology.

Robert Glenn Murray, M.D., Highway #7 E., Climax Springs 65324, has become a member of Lake of the Ozarks Medical Society. Dr. Murray is a native of Omaha, Neb., received his preliminary education at the University of Nebraska and his M.D. degree at the University of Nebraska in 1950. He specializes in family practice.

James E. Stephens, D.O., 3606 Indiana, P.O. Box 2097, Joplin 64803, has become a member of Jasper County Medical Society. Dr. Stephens is a native of Joplin, received his preliminary education at Joplin Junior College and his D.O. degree at Kansas City College of Osteopathic Medicine in 1952. He specializes in general practice.

New Student Members

St. Louis University

Valerie A. Boaz
Susan Brown
David W. Brumley
Robert A. Buzzell
Nancy L. Cwach
James W. DeLong
James W. Ehlich, Jr.
Jennifer E. Finley
Jeffrey S. Kanel
Wayne S. Karaki
Joseph L. Kelley, III
Dan J. Kopacz
Joelle M. Lambert
Timothy S. McComas
Stephen J. Neu
Anne M. Piche
Douglas J. Praus
Susan E. Schukar
Donald D. VanFossan, Jr.
James J. Walsh
Daniel E. Weakly

University of Missouri-Kansas City

Peter M. Peer

Washington University

William G. Hutchison

In Memoriam

Claude S. Grant, M.D., 2726 Sublette Way, St. Joseph 64506; graduate of the University of Wisconsin, 1931; member of Buchanan County Medical Society; aged 79; died Dec. 17, 1981.

Richard H. Kiene, Sr., M.D., 4320 Wornall Rd., Kansas City 64111; graduate of University of Pennsylvania, 1935; member of Jackson County Medical Society; aged 72; died Dec. 22, 1981.

Samuel Schultz, M.D., 1284 Enderbury, St. Louis 63125; graduate of Washington University, 1938; member of St. Louis Metropolitan Medical Society; aged 69; died Jan. 6, 1982.

Clifford H. Bockelman, M.D., 2615 Brentwood, St. Louis 63144; graduate of St. Louis University, 1931; member of St. Louis Metropolitan Medical Society; aged 76, died Jan. 12, 1982.

Joseph L. Lucido, M.D., 6 Bellerive Acres, St. Louis 63121; graduate of St. Louis University, 1937; member of St. Louis Metropolitan Medical Society; aged 70; died Jan. 13, 1982.

Percy B. Newman, M.D., 8857 New Sappington Rd., St. Louis 63126; graduate of Washington University, 1907; member of St. Louis Metropolitan Medical Society; aged 96; died Jan. 17, 1982.

Edward Olney Shelton, M.D., 104 W. Newton, Eldon 65026; graduate of the University of Kansas, 1932; member of Lake of the Ozarks Medical Society; aged 78; died Jan. 18, 1982.

Robert L. Ward, M.D., 1855 Chambers Farm Ct., Chesterfield 63017; graduate of Washington University, 1953; member of St. Louis Metropolitan Medical Society; aged 58; died Jan. 23, 1982.

Hubert S. Pruett, M.D., 10 Log Cabin Dr., St. Louis 63124; graduate of the St. Louis University, 1932; member of St. Louis Metropolitan Medical Society; aged 80; died Jan. 28, 1982.

Elmer P. Schluer, M.D., 9 Long Meadows, St. Louis 63131; graduate of Washington University, 1926; member of St. Louis Metropolitan Medical Society; aged 79; died Feb. 9, 1982.

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

medical melange

Notes of interest from Here . . . . and There

Dr. Kenneth Glover of Mount Vernon, a retired physician, has been honored by the Ozarks Medical Society which has named an award in his honor. Beginning this year, each outgoing president of the society will receive "The Kenneth Glover Presidential Award." Dr. Glover has been a member of Ozarks Medical Society for 42 years and has held all the elective offices of the society. He also served as delegate to the Missouri State Medical Society Association House of Delegates for many years.

Missouri State Heart Fund Chairman **M. Graham Clark** has announced that **Dr. Kirby L. Turner** of Poplar Bluff will serve as the 1982 Heart Fund Chairman in Butler County. In past years, Dr. Turner has assisted the Heart Association by coordinating fund raising activities.

Dr. Robert E. Bregant, Jefferson City, addressed the Jefferson City Rotary Club recently. His subject was health care in China. Dr. Bregant journeyed to China last summer with 50 other American physicians, nurses and medical students as part of the Friendship Docents Tour sponsored by the University of Missouri-Kansas City and Shanghai Medical College No. 2. Senior members of the tour group prepared three lectures each to be delivered at Chinese hospitals and medical schools. Dr. Bregant said the Chinese physicians were especially interested in CAT scans, bone tumors and the problems of industrial pollution.

Dr. Michael K. Blank, DeSoto, has been installed as president of the Jefferson County Medical Society for 1982. **Dr. Maria C. Albano** is now secretary-treasurer. **Dr. Duk J. Park** is the retiring president.

Dr. Charles A. Worley, Sweet Springs, was recently appointed to the Commission on Health Care Services of the American Academy of Family Physicians. The functions of this Commission are to study and develop recommendations on the delivery of health care services and payment for such services, particularly the services of family physicians.

Dr. Carlos A. Perez, M.D., St. Louis, has been elected president of the American Society of Therapeutic Radiologists. Following his one-year term as president, Dr. Perez will become chairman of the Board of Directors for 1983.

Dr. Eli Robins, M.D., St. Louis, has received one of the most prestigious honors awarded in the field of psychiatry. The Salmon Committee on Psychiatry and Mental Hygiene Medal was presented to him at the committee's 50th annual meeting in New York. Dr. Robins received the award for his distinguished service to the field of psychiatry and his knowledge of mental disorders.

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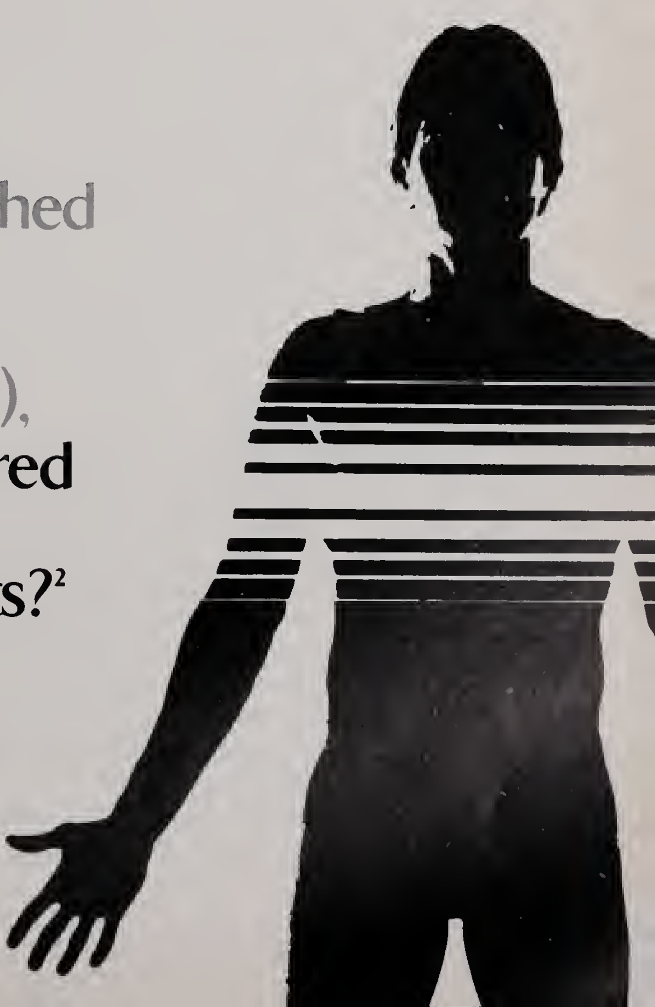
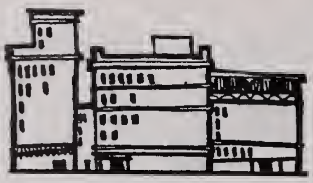
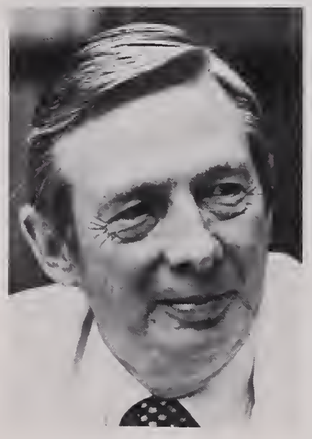
In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study), **which Step-2 regimen was preferred and was deemed effective without significant adverse effects?**[2]





NEWS From the Medical Schools

ST. LOUIS UNIVERSITY



Dr. Olson

Robert E. Olson, M.D., Ph.D., Alice A. Doisy Professor of Biochemistry, chairman of the department and professor of medicine, has accepted a position as associate dean for academic affairs, professor of biochemistry and professor of medicine at the University of Pittsburgh School of Medicine, Pittsburgh, Pa. effective Sept. 1, 1982.

At the University of Pittsburgh, Dr. Olson will aid the dean in the management of academic programs throughout the school of medicine, particularly in the basic sciences where expansion of the current faculty and programs is planned. He will coordinate this basic science planning and development with the education and research training of medical students, fellows and residents. He is charged with encouraging scientific collaboration among the basic science departments and clinical departments in the school of medicine as well as science departments elsewhere in the university. In addition, he will oversee curricular activities in the basic sciences and serve as director of Graduate Studies in the school of medicine.

David Challoner, M.D., dean of St. Louis University School of Medicine, commented, "We regret that Dr. Olson will be leaving our school. In the 17 years that he has been head of the Edward A. Doisy Department of Biochemistry, he has recruited an outstanding faculty of biochemists and molecular biologists and created an academic program which has made his department preeminent in this school and the country as a whole. The loss of his leadership, not only in biochemistry, but also in building bridges to the clinical departments, will be sorely felt."

Dr. Olson's principal research interests are in the mechanisms of fat transport in man, the biosynthesis and function of the fat-soluble vitamins and related compounds, and in experimental and clinical nutrition. While at St. Louis University, he built a Clinical Research Center in Chiang Mai, Thailand and organized and directed a program of clinical investigation of protein-calorie malnutrition in Northern Thai children.

Dr. Olson left the University of Pittsburgh in 1965 to join the St. Louis University faculty. At the University of Pittsburgh, he held the position of professor of biochemistry and nutrition and chairman of the department in the Graduate School of Public Health. He received his Ph.D. degree from St. Louis University in 1944 under the tutelage of Prof. Edward A. Doisy whom he succeeded as chairman. He received his M.D. degree from Harvard Medical School in 1951 and interned at the Peter Bent Brigham Hospital in Boston before going to the University of Pittsburgh in 1952.

Four St. Louis University professors from the School of Medicine presented papers or symposiums at the annual meeting of the American Educational Research Association on March 19-23 in New York, N.Y.

Hulda Grobman, Ed.D., professor of health education; *Alice D. Kitchen*, M.D., assistant dean for student affairs; and *Logan Ludwig*, M.L.S., assistant professor and media librarian, spoke at a symposium titled "A Pragmatic Consideration of the Attributes of Quality in Audiovisual Material for Health Professionals." Dr. Grobman addressed "A Health Professions Educator's Perspective," Dr. Kitchen discussed "The Clinician's Perspective," and Ludwig spoke on "A Media Reviewer's Perspective."

Alberto Galofre, M.D., assistant dean for curriculum, critiqued papers in a session titled "Acculturation of Foreign Medical Graduates."

The audiovisual department at the Medical Center works closely with the Office for Curricular Affairs and the Department of Biomedical Communications to provide media services for medical education.

UNIVERSITY OF MISSOURI-KANSAS CITY

Frederick C. Robbins, M.D., president of the Institute of Medicine of the National Academy of Sciences and a Nobel Laureate, will deliver the first Carl Migliazzo Memorial Lectureship held in conjunction with graduation week activities in May at the School of Medicine.

In 1954, Dr. Robbins received the Nobel Prize in Physiology and Medicine jointly with *Dr. John F. Enders* and *Dr. Thomas H. Weller* for their work in the cultivation of poliomyelitis virus in tissue culture and the application of this technique.

Dr. Robbins served as dean of the Case Western Reserve University School of Medicine from 1966 until 1980.

Dean Harry S. Jonas and *Associate Dean Charles B. Wilkinson* recently spoke at a University of Nebraska Medical Center program on last July's Hyatt Regency Hotel disaster in Kansas City. The program in Omaha was designed for health professionals, volunteer emergency medical personnel, fire fighters, and other people interested in learning how Kansas City's disaster planning worked on July 17, 1981, when two skywalks in the Hyatt collapsed, killing 113 and injuring 188.

Dr. William Robinson and *Dr. Mark Singsank*, both assistant professors of emergency health services, and *Dr. Ray Snider*, chairman of Truman Medical Center's (TMC) Department of Surgery, also participated in the program. Dr. Robinson acted as triage officer at the hotel, assigning the injured to hospitals; Dr. Singsank was in charge of the TMC emergency room that night; and Dr. Snider performed surgery on the injured during the night at TMC.

Dean Jonas acted as moderator for the program. Dr. Wilkinson, who is also executive director of the Greater Kansas City Mental Health Foundation, discussed the emotional impact of the disaster on the rescuers, the victims and the observers. He currently is working on a study on those issues.

Truman Medical Center, the primary affiliated adult teaching hospital for the School of Medicine, and Children's Mercy Hospital have been designated Level I Trauma Centers. The Missouri Division of Health designation means that the two hospitals are best equipped and staffed to handle trauma cases.

The trauma center designation is the result of a review completed by the Trauma Center Designation Committee, chaired by *Jerry Overton*,

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations,
which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]

director of the Mid-America Regional Council Emergency Rescue, Inc. (MARCER). MARCER then made a recommendation to the Governor's Advisory Council on Emergency Medical Services as to which area hospitals should be designated as trauma centers.

This designation by the state underscores the fact that Truman Medical Center is the community resource which stands fully ready and prepared to provide the most sophisticated treatment of emergency conditions for all citizens, regardless of their ability to pay.

The St. Louis Friends of the UMKC School of Medicine have planned their fourth annual parents' trip to Kansas City in late April. Members of the St. Louis Friends group and parents of 1982 Year-1 students are working with the University to organize the weekend visit. Highlights of the trip include a dinner theatre and special sessions for the parents at the School of Medicine.

UNIVERSITY OF MISSOURI-COLUMBIA

A gift of $15,000 to the proposed Health Sciences Library of the School of Medicine has been made by Burlington Northern Foundation.

In a presentation to *Chancellor Barbara Uehling*, Burlington Northern Public Relations Regional Manager *Patrick D. Hiatte* said the donation was made to show Burlington Northern's appreciation of the role of the University in the state of Missouri.

"Burlington Northern's responsibility to the state's communities goes beyond providing transportation service," said Mr. Hiatte in presenting the check to Chancellor Uehling and *Charles C. Lobeck*, dean of the School of Medicine. "Part of the fulfillment of that responsibility is the support of academic excellence."

In thanking Burlington Northern, Chancellor Uehling said the gift "will mean increased resources for today's students and tomorrow's health care professionals." The donation brings the Health Sciences Library fund to a total of $2,157,755 from the private sector.

The School of Medicine has received a continuation of grant funds from The Robert Wood Johnson Foundation for its Family Medicine Fellowship Program.

The $910,227 grant provides an additional three years' funding for the program that seeks to develop a cadre of young faculty who will contribute to academic family medicine. The UMC Department of Family and Community Medicine is one of only five universities nationwide offering

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it's the combination found in...

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reserpine 0.125 mg)

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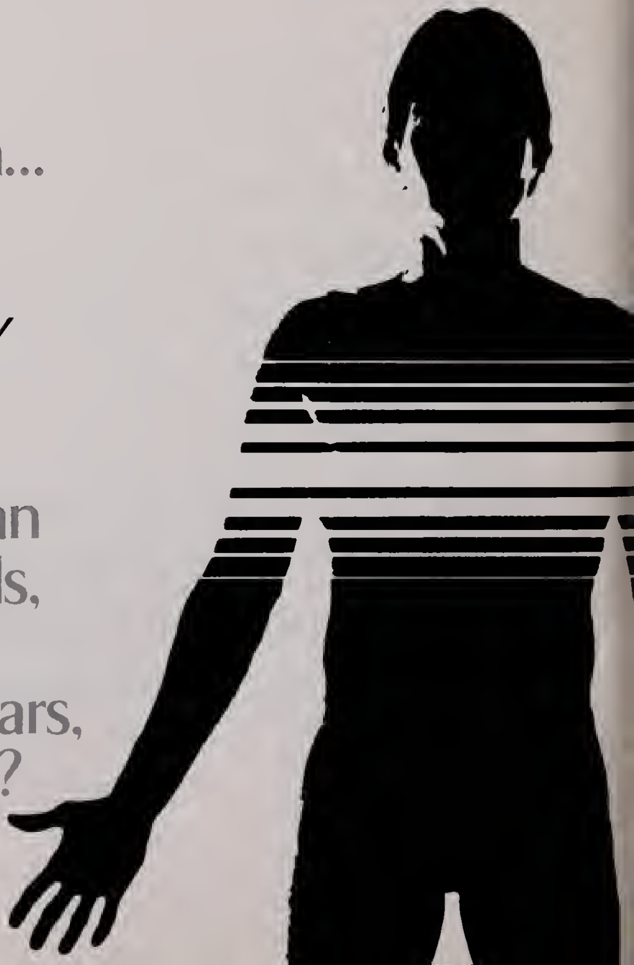

the Foundation-supported fellowship program designed for physicians preparing for full-time academic careers in family medicine.

"This is another indication that UMC has achieved national academic leadership in family medicine education," commented *Charles C. Lobeck*, dean of the School of Medicine.

Since 1970, the number of U.S. medical school graduates selecting family medicine residency training has grown from 230 to more than 7,000. Family practice departments have been formed in most medical schools, with the result that a shortage of full-time faculty developed in some areas. To help alleviate that shortage, UMC began in 1979 to participate in the fellowship program that has been continuously supported since its inception by The Robert Wood Johnson Foundation of Princeton, N. J.

Three or four physicians are selected each year by the Department of Family and Community Medicine for the two-year program. Fellows participate as faculty, spending most of their time in academic development.

Among the largest philanthropic organizations in the world, The Robert Wood Johnson Foundation is a leader in supporting efforts to improve health care programs in the U.S.

Dr. A. E. Daniel, assistant professor of psychiatry (child psychiatry) had been appointed to the editorial board of the *American Journal of Forensic Psychiatry*, a new journal focusing on the interface of psychiatry and law.

Dr. Travis Solomon recently joined the University as an associate professor of physiology and associate chief of staff for research and development at the Harry S. Truman Memorial Veterans Association. A well-established investigator in the area of gastrointestinal physiology, Dr. Solomon is the recipient of research grants from the National Institutes of Health and the Veterans Administration.

Dr. James O. Davis planned the scientific meeting and served as president of the International Society of Hypertension held at the Congress Unit in Mexico City in February. *Dr. Herman Villarreal* of the Instituto Nacional de Cardiologia in Mexico was the official host for the meeting in which an anticipated 800 to 1,000 scientists participated.

WASHINGTON UNIVERSITY

Dr. Joseph Volpe, researcher and professor of pediatrics, neurology and biological chemistry, has been awarded a grant of approximately

And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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☐ Journal article reprints of the clinical studies mentioned in this ad

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SM-2348 11/81

$567,000 from the National Institutes of Health.

Also a pediatric neurologist at St. Louis Children's Hospital and a pediatrician at Barnes Hospital, Dr. Volpe will use the grant to continue his research on the regulation of lipid synthesis during neural development. The grant will be used over a five-year period. The major emphasis of his research will be to elucidate the critical relations between regulation of lipid synthesis and the development of the nervous system.

Prior to his arrival at Washington University School of Medicine in 1971, Dr. Volpe completed his training in pediatrics and neurology at the Massachusetts General Hospital and with a research fellowship at the National Institutes of Health. He graduated from Harvard Medical School in 1964.

Dr. Thomas B. Ferguson, clinical professor of surgery, Division of Cardiothoracic Surgery at the School of Medicine and attending surgeon at Barnes Hospital, presented the Alpha Omega Alpha Fall Honors Day Lecture and served as Visiting Professor of Thoracic Surgery at the Medical College of Georgia, Augusta, Ga. on Nov. 13-14, 1981.

Dr. Ferguson was lecturer at Touro Infirmary, New Orleans, La. and Visiting Professor in the Department of Surgery at Tulane University School of Medicine in New Orleans on January 7 of this year.

At the 26th Annual Tri-State Thoracic Case Conference for physicians of Alabama, Louisiana and Mississippi held on January 8-9 in Biloxi, Miss., Dr. Ferguson served as the guest consulting surgeon.

Bevra H. Hahn, M.D., associate professor in the Department of Medicine and director of its Arthritis Center, has been appointed to the 18-member National Arthritis Advisory Board by Health and Human Services Secretary Richard S. Schwieker. Dr. Hahn is also a Barnes rheumatologist.

The board was established by the Health Programs Extension Act of 1980 to review and evaluate the ongoing Arthritis Plan which was developed by the National Commission on Arthritis and Related Musculoskeletal Diseases. The plan contains more than 150 specific recommendations for arthritis research, arthritis centers, epidemiology, data systems, education and community programs.

Dr. Hahn received her M.D. degree from The Johns Hopkins University in 1964. She interned and served her residency at Barnes Hospital.

Salutensin® Salutensin-Demi™

(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78
For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

(Continued from page 180)

From 1966-1969, she was a Fellow in Medicine in the Connective Tissue Division at The Johns Hopkins University. In 1969, she joined the staff of Washington University as an instructor.

Jonathan Fleischmann, M.D., a resident in the Division of Urology, has received a renewal of his National Kidney Foundation Research Fellowship for 1982-1983. He is one of 33 persons receiving fellowships this year for basic biological research in renal and urologic diseases. His fellowship was for $13,500.

Dr. Fleischmann will use the fellowship to investigate the usefulness of in vitro chemosensitivity testing as a predictive tool in determining which chemotherapeutic agents provide the greatest amount of tumor-cell kill following surgery for kidney, bladder and prostate cancer.

A 1978 graduate of Brown University School of Medicine, Dr. Fleischmann interned and served his residency in general surgery at Barnes Hospital. Currently, he is completing his residency in urology.

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Hydroflumethiazide

Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

SUPPLIED

Bottles of 100 and 1000 scored 50 mg. tablets.

References:
1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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FINANCIAL STATEMENT FOR THE YEAR 1981

LENNERTSON & COMPANY
Certified Public Accountants
ST. LOUIS, MISSOURI 63144

February 2, 1982

Missouri State Medical Association
113 Madison
Jefferson City, MO 65101

Gentlemen,

An examination has been made of the balance sheet of Missouri State Medical Association, a non-profit Missouri corporation, as of December 31, 1981, and attached are the related statements of income and reserves and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion the aforementioned financial statements present fairly the financial position of Missouri State Medical Association at December 31, 1981, and the results of its operations and the changes in its financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Yours very truly,
Lennertson and Company

Exhibit A

Missouri State Medical Association
Balance Sheet, December 31, 1981

Assets		
Current Assets		
Cash in Banks and On Hand	$ 36,118	
Certificates of Deposits	557,205	
Accounts Receivable — Advertisers	8,288	
Accounts Receivable — Others	4,218	
Note Receivable — Momedico	67,617	
Tax Deposits	204	
Total Current Assets		$ 673,650
Investments (Exhibit C-2)		
Certificate of Deposit	$270,000	
Bonds and Notes at Cost	32,000	
Cash Awaiting Investment	50,000	
Corporation Stocks at Cost	70,098	
Equity Investments:		
M.S.M.I. — 100% owned	79,894	
Momedico — 16% owned	575,669	
Total Investments		1,077,661
Dues Receivable — Exhibit D (See Reserve-Contra)		13,885
Fixed Assets (At Cost)		
Land	$ 26,000	
Building	137,810	
Furniture and Fixtures	90,059	
Total	$253,869	
Less Reserve for Depreciation	76,355	177,514
Advance for Travel		634
		$1,943,344

Liabilities		
Current Liabilities		
Accounts Payable	$ 14,806	
Note Payable Momedico — due in one year	54,266	
Due American Medical Association	250	
Due Missouri State Medical Foundation	70	
Due County Medical Societies	173	
Total Current Liabilities		$ 69,565
Deferred Credit to Income (Advance Dues)		238,380
Reserve for Uncollected Dues (See Receivables)		13,885
Note Payable — Boatmen's Bank		72,432
Note Payable — MOMEDICO		271,334
Subordinated Debenture Notes		673,522
Reserve for Future Activities —		
Balance 1/1/80	$400,824	
Gain on Sale of Securities	409	
Reinvestment of Permanent Investment Income	59,428	
Federal and State Income Taxes	(6,925)	
Excess of Expense Over Income — Exhibit B	150,490	604,226
		$1,943,344

Exhibit B

Missouri State Medical Association
Income Statement for the Year 1981

Particulars	*General Activities*	*Journal Publication*	*Total*
Dues Received (including $3.00 per member annually for the Journal)	$519,976	$ 15,662	$535,638
Rentals — Annual Session Exhibit Space	13,200		13,200
Annual Session Contributions	1,100		1,100
Subscriptions to the Journal — Nonmembers		3,783	3,783
Advertising Space — The Journal		53,755	53,755
Investments — Interest and Dividends	135,653		135,653
Collection Fees on A.M.A. Dues	10,416		10,416
Reimbursed Fees for Services	31,516		31,516
Equity Income — Subsidiaries —			
M.S.M.I. — 100% owned	73,138		73,138
Momedico — 16% owned	12,658		12,658
Total Income	$797,657	$ 73,200	$870,857
Expenses			
Salaries	$209,999	$ 21,503	$231,502
The Journal — Paper, Printing, Etc.		91,019	91,019
Consultation Fee	5,500		5,500
Commission on Journal Advertising		8,322	8,322
Commission and Meeting Expenses	127,074		127,074
Computer Expenses	6,966		6,966
Custodian Fees — Investments	588		588
Depreciation	14,319	1,085	15,404
Dues and Subscriptions	1,764		1,764
Employees' Pension Plan Contributions	26,257	3,900	30,157
Equipment Purchases, Rentals and Repairs	4,622	450	5,072
Insurance — General	2,533		2,533
Insurance — Blue Cross	8,579	1,036	9,615
Interest Expense	36,027		36,027
MMPAC — Administrative Expenses	2,437		2,437
Occupancy Expense	9,410	1,071	10,481
Postage	16,168		16,168
Professional Fees	11,236	1,000	12,236
Public Relations Survey	6,843		6,843
Reinvestment Fixed Income	59,428		59,428
Stationery, Printing and Office Supplies	7,275		7,275
Student Awards	400		400
Taxes — Payroll	13,704	1,302	15,006
Taxes — Real Estate	609		609
Telephone and Telegraph	9,542	1,055	10,597
Traveling Expenses — Executive Secretary and Assistants	7,344		7,344
Total Expenses	$588,624	$131,743	$720,367
Excess of Expenses over Income	$209,033	$(58,543)	$150,490

Exhibit C-1

Missouri State Medical Association
Statement of Commissions and Meeting Expenses
for the Year 1981

Annual Session		$ 47,107
Council		24,440
Delegates to A.M.A.		27,410
Public Affairs		18,352
Women's Auxiliary		5,174
Commissions:		
Commission on Medical Economics, Third Party Medicine, and Governmental Relations	$ 263	
Commission on Continuing Education and Health Manpower	2,997	
Committee on Interspecialty Medicine	211	
Committee on Impaired Physicians	1,022	
Committee on Medical Legal Affairs	98	4,591
Total		$127,074

Exhibit C-2

Statement of Investments December 31, 1981

Description		
Mercantile Trust — C.D. 13.5% due 12/28/82		$270,000
Cash Awaiting Investment	$50,000	
Federated Master Trust	27,000	
Pacific Gas and Electric 4½% due 6/1/90	5,000	82,000
100 shares Alcan Aluminum LTD	$ 3,703	
100 shares Allis-Chalmers Corp.	3,490	
65 shares American Tel. & Tel.	4,125	
330 shares Baker International	2,970	
200 shares Baldor Electric Co.	4,106	
208 shares Belco Petroleum Corp.	6,716	
400 shares Central and Southwest	6,346	
100 shares Combustion Engineering	5,216	
100 shares Cross and Trecker Corporation	2,525	
90 shares Dart and Kraft, Inc.	4,158	
100 shares Gilbert Associates, Inc.	4,151	
100 shares Interco	2,955	
145 shares International Papers Co.	5,563	
100 shares Johnson and Johnson	2,959	
100 shares Lilly Eli and Co.	5,953	
244 shares Morgan J. P. & Co.	5,162	70,098
Total Cost (Market Value $432,964)		$422,098
Equity Investments		
M.S.M.I. Inc. 100% owned		79,894
Missouri Medical Insurance Company 16% owned		575,669
Total		$1,077,661

Exhibit D

Missouri State Medical Association

Dues Receivable and Membership by Societies
December 31, 1981

Societies	*MEMBERSHIP* Students	Junior	Active	Honor	Total	*Unpaid Dues*
Andrew			3	1	4	
Audrain			25	2	27	$ 62.50
Barton			4	1	5	
Boone		20	264	16	300	$1,737.50
Buchanan			107	19	126	250.00
Butler-Wayne-Ripley-Carter			64	4	68	875.00
Callaway			11	5	16	125.00
Cape Girardeau			96	5	101	125.00
Chariton-Macon-Monroe-Randolph			20	7	27	125.00
Clay			137	2	139	750.00
Clinton			4	1	5	
Cole		1	64	8	73	
Cooper			7	1	8	
Dallas-Hickory-Polk-Dade			7	1	8	
Dunklin			18		18	250.00
Franklin-Gasconade-Warren			33	5	38	375.00
Grand River		1	32	4	37	135.00
Greene			294	27	321	375.00
Henry			6	4	10	
Howard			6	1	7	
Jackson		76	980	178	1,234	1,155.00
Jasper			84	13	97	375.00
Jefferson			25	2	27	156.25
Johnson			12	3	15	
Laclede			8		8	
Lafayette-Ray			25	2	27	
Lake of the Ozarks			14	2	16	
Lewis-Clark-Scotland			2		2	
Marion-Ralls-Shelby			33	2	35	125.00
Mid-Missouri			34	4	38	250.00
Mineral Area			32	3	35	
Moniteau			2	1	3	
Montgomery			1		1	
Northwest Missouri			26	1	27	312.50
North Central			3		3	31.25
Ozark		1	35	7	43	250.00
Pemiscot			12	1	13	250.00
Perry-Ste. Genevieve			18	3	21	125.00
Pettis			32	2	34	125.00
Pike			7		7	
Platte			3		3	
St. Charles-Lincoln		1	72	3	76	3,625.00
St. Louis City Metropolitan		161	2,048	270	2,479	3,625.00
Saline			10	2	12	
Semo			37	3	40	250.00
South Central			27		27	
Tri Lakes			13	2	15	625.00
Webster			2		2	
West Central			31	10	41	250.00
St. Louis University	132				132	85.00
University of Missouri-Columbia	105				48	30.00
University of Missouri-Kansas City	48				48	30.00
Washington University	53		53		53	105.00
Totals	338	261	4,830	628	6,057	$13,885.00 (A)

(Continued in next column)

(A) Delinquent dues of members at December 31, 1981 carried at the request of local Societies. Other delinquent members were dropped from membership in accordance with the by-laws.

Exhibit E

Missouri State Medical Association
Statement of Source and Application of Funds for the Year 1981

Funds Acquired		
Excess of Income over Expenses for year	$150,490	
Plus Depreciation (non cash)	15,404	
Funds Provided from Operations		$165,894
Decrease in Travel Advances		330
Increase in Deferred Credits to Income		10,809
Collection of Subordinated Notes		172,264
Gain on Sale of Securities		409
Reinvestment of Permanent Investment Income		59,428
Total Funds Acquired		$409,134
Funds Applied		
Increase in Investments	$ 91,928	
Payments on Bank Loans	138,709	
Payments on Momedico Loan	54,262	
Federal and State Income Taxes	6,925	
Total Funds Applied		291,824
Balance — Increase in Working Capital		$117,310
Accounted for as follows:		
Increase in Cash and Certificates of Deposit		$ 65,451
Increase in Tax Deposits		204
Decrease in Current Liabilities		139,068
		$204,723
Less Decrease in Accounts and Receivable		87,413
Balance — Increase in Working Capital		$117,310

Missouri State Medical Association
Notes to Financial Statements
December 31, 1981

1. *Investments*. Permanent investments with a cost of $422,098 were confirmed by a statement from bank and saving and loan association. Equity investment in Missouri Medical Insurance Company was obtained from unaudited financial statements prepared by the company's employees. M.S.M.I. equity investment was obtained from audited statements.

2. *Building, Equipment and Depreciation*. The building occupied by the Association with a cost of $137,810 will be depreciated over a useful life of 30 years and the furniture and fixtures in the amount of $90,059 has a 10 year useful life. Depreciation is computed on a straight line basis.

3. *Dues and Assessments*. Membership dues and assessments received in advance are carried as deferred credit to income and will be picked up as income in the next year. Dues and assessments in effect for each member during the year 1981 are as follows:

	Active	*Junior*	*Student*
Journal	$ 3.00	$ 3.00	$3.00
Association General Fund	112.00	7.00	2.00
Foundation Assessment	10.00		
Mo. State Medical Assn. Dues and Assessments	$125.00	$10.00	$5.00
American Medical Association	250.00	35.00	
Totals	$375.00	$45.00	$5.00

4. *Notes Payable – Boatmen's Bank*. The amount due Boatmen's Bank will be paid off as collections are made on the Subordinated Notes. The bank loan is secured by securities held by Mercantile Trust Company.

5. *Subordinated Notes*. The notes are issued without interest or maturity date and interest or repayment is at the discretion of the council of the Missouri State Medical Association, and the restrictions contained in the subordinated notes.

6. *Income Taxes*. The Internal Revenue Service requires that the Association pay taxes on its unrelated business income. For the year ended December 31, 1981, the Association had a gain of $20,187.00 on their unrelated business income, resulting in a tax of $6,925.00.

FINANCIAL STATEMENT

MISSOURI STATE MEDICAL FOUNDATION DECEMBER 31, 1981

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
ST. LOUIS, MISSOURI 63144

February 3, 1982

Missouri State Medical Foundation
113 Madison
Jefferson City, MO 65101

Gentlemen,

The balance sheet of Missouri State Medical Foundation was examined as of December 31, 1981, and the related statements of support, revenue and expenses, and changes in fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned statements present fairly the assets and liabilities of Missouri State Medical Foundation at December 31, 1981, arising from cash transactions, and the revenues collected and expenditures made by it during the year then ended, on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON AND COMPANY

EXHIBIT A

Missouri State Medical Foundation
Balance Sheet (Cash Basis) December 31, 1981

Assets

Current Assets		
Cash — Central Trust Bank	$ 59,410	
Savings Account	14,211	
3 Month Times Savings	2,608	
C-D, Mercantile Trust — due 1/4/82	175,000	
Total Current Assets		$251,229
Loans Receivable — Medical Students	$833,048	
Less Reserve for Losses	23,904	809,144
		$1,060,373

Fund Reserve

Balance January 1, 1981		$973,421
Additions for the Year 1981		
Interest on Student Loans	$ 20,108	
Interest on Bank Deposits	25,918	
Contributions (detail below)	9,411	
Assessments of Members, Active $10	46,160	101,597
		$1,075,018
Less Expenses for the Year 1981		
Administrative Services	$ 7,500	
Professional Fees	1,900	
Printing, Meetings and Miscellaneous	567	
Provision for Losses on Student Loans	4,678	14,645
		$1,060,373

Contributions

Corporations	$3,834
Tribute	155
Physicians	300
Others	5,122
	$9,411

Missouri State Medical Foundation
Notes to Financial Statements
December 31, 1981

1. *Income*. Accrued interest on outstanding loans at December 31, 1981 amounted to $53,283.90 and is not included in the loan balance in Exhibit A.

2. *Student Loans*. Summary of Loans Receivable.

Loans Receivable January 1, 1981	$736,591.11
Loans made during the year	172,000.00
	$908,591.11
Less Loan Repayments	75,543.59
Loans Receivable December 31, 1980	$833,047.52

3. *Reserve for Losses*. This reserve is carried to offset uncollectable loans and to charge off student loan balances in the event of death of the borrower.

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in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-030

AN AMA PROGRAM to provide patients — through their physicians — with written information about prescription drugs will be in operation by mid-year. The first series of Patient Medication Instruction (PMIs), designed to supplement the physician's oral instructions, will cover ten widely prescribed drugs. Eventually, as many as 200 medications are expected to be included in the voluntary program. Single-sheet PMIs on a given drug will be bound into pads and will be available for purchase by physicians. A collection of the various PMIs will be made available to physicians who prefer to reproduce them. The scientific basis for the PMIs will be the authoritative compendium *AMA Drug Evaluations*. Physicians and scientists in the AMA Division of Drugs will serve as principal consultants.

A BILL TO LIMIT the FTC's jurisdiction over professions that are regulated by the states was introduced in the Senate. The bill has bipartisan backing. Sen. James McClure (R-Ida.) said the measure (S1984) "would end the suppression of self-regulation by preventing the FTC from initiating any more actions against the professions or their non-profit associations." The proposal is similar to a draft bill prepared by the AMA.

THE PERCENTAGE of women physicians is highest in the District of Columbia, according to statistics compiled by the AMA's Committee on Women Physicians in Organized Medicine. The 764 women physicians in the District make up 18.4% of the physician population there. As of November, 1981, the percentage of women physicians in the nation was 12%. In New York, 16.7% of the physicians are women. Other states with more than 14% women physicians are Delaware, Illinois, Maryland, Massachusetts and New Jersey. The AMA committee said the increasing enrollment of women in medical schools could raise the national percentage of women physicians to 33% within the decade.

THE AMA PRESENTED its views to Congress and federal administrative agencies 88 times during 1981. The Association gave testimony on 19 occasions and submitted 69 written statements.

THE GOVERNMENT SHOULD ENCOURAGE, not hinder, the efforts of professionals to advance their ethical standards for the benefit of patients, the AMA told the U.S. Supreme Court in oral arguments challenging the Federal Trade Commission's jurisdiction over not-for-profit professional associations and their ethical pronouncements. The justices were urged to reject the FTC's 1979 order prohibiting the AMA from involving itself in advertising by physicians unless the advertising "would be false or deceptive" under the Federal Trade Commission Act, and from involving itself in the consideration provided to physicians for their services. The AMA's attorney pointed out that the AMA was the first professional organization to rewrite its ethical code following the Supreme Court's historic 1975 decision rejecting a state bar association's fee standard. A decision on the case is not expected until late spring or summer.

A STUDY of the AMA's Annual and Interim Meetings by a five-delegate advisory committee is under way. The committee, which is reviewing the format and procedures of the two sessions, was called for by the House of Delegates. On the committee are Henry F. Twelmeyer, M.D., Wauwatosa, Wis. (chairman); Mylie E. Durham, M.D., Houston; Grant V. Rodkey, M.D., Boston; C. J. Tupper, M.D., Davis, Calif.; and Frank B. Walker, M.D., Grosse Pointe Farms, Mich.

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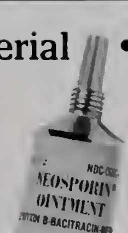

DESCRIPTION: Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and ½ oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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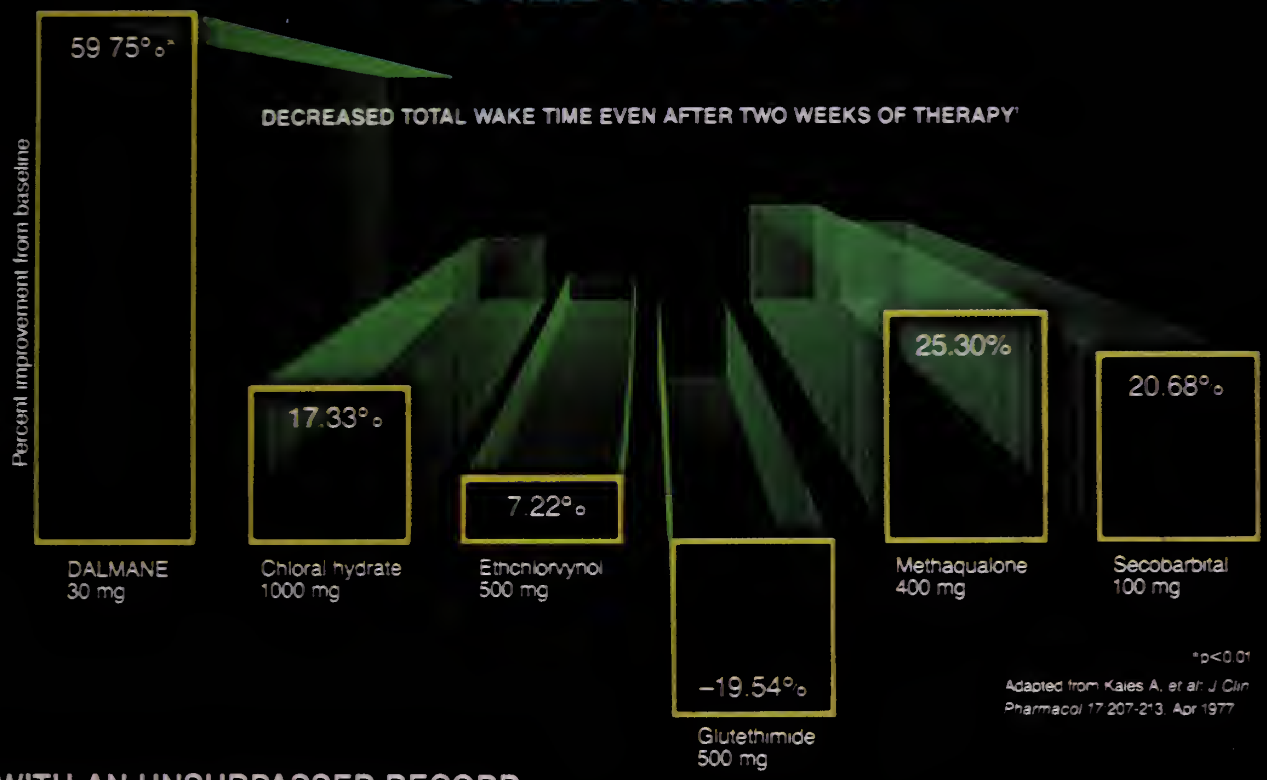

DECREASED TOTAL WAKE TIME EVEN AFTER TWO WEEKS OF THERAPY[1]

*p<0.01

Adapted from Kales A, *et al*: *J Clin Pharmacol* 17:207-213, Apr 1977

WITH AN UNSURPASSED RECORD OF EFFICACY AND SAFETY

The efficacy of Dalmane (flurazepam HCl/Roche) has been documented in 185 studies involving 9141 patients suffering from one or more of the three major forms of insomnia–difficulty falling asleep, staying asleep and sleeping long enough.[2]

Relative safety was demonstrated in a large study of 2542 hospitalized medical patients. Only 3.1% of these patients reported adverse reactions–predominantly unwanted residual drowsiness. None of the reactions were considered serious by attending physicians.[3]

FOR SLEEP WITHIN 17 MINUTES[2] AND NO WORSENING OF SLEEP ON DISCONTINUATION

Rapid sleep induction, within 17 minutes on average, sets the stage for insomnia relief. And, after discontinuation of Dalmane for periods ranging up to 14 nights, no worsening of sleep compared with baseline was observed.[4]

Should insomnia recur, the patient may require guidance in setting up a regular sleep program to help provide the optimum environment for the onset of natural sleep. If hypnotic therapy is required, it should be given for the shortest time at the lowest effective dose to achieve the desired goal.

Consider other medications the patient may be taking (including alcoholic beverages) and be aware of possible drug interactions. Please note that patients should be treated for underlying physical or psychological factors before therapy with a sleep medication is undertaken.

DALMANE® Ⓒ IV
flurazepam HCl/Roche

THE STANDARD OF HYPNOTIC EFFICACY FROM THE LEADER IN SLEEP RESEARCH

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Please see reverse side for a summary of product information.

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One 15-mg capsule *h.s.*–recommended initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.*–usual adult dosage
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THE STANDARD FOR HYPNOTIC EFFICACY WITH IMPORTANT ADDED BENEFITS

- Well tolerated[2]
- No chemical interference with many commonly ordered laboratory tests, including triglycerides, uric acid, glucose, SGOT, alkaline phosphatase and total protein[5,6] (See adverse reactions section of complete product information.)
- Compatible with chronic warfarin therapy; no unacceptable fluctuation in prothrombin time reported[7,8]

UNLIKE NONSPECIFIC MEDICATIONS USED FOR SLEEP

Tricyclic antidepressants

–which are *not* sleep specific,[9] yet are sometimes used in nondepressed patients for sleep

–which can cause transient insomnia in the elderly[10]

–which can require careful monitoring in cardiovascular patients[10]

–which have strong anticholinergic effects[10]

Antihistamines

–which are *not* reliable sleep-inducing agents[11]

–which may produce stimulation instead[11]

–which have anticholinergic effects[11]

Major tranquilizers

–whose side effects may be troublesome for nonpsychotic patients[12]

–where tolerance for sedation appears rapidly[12]

Dalmane does not cause significant worsening of sleep beyond baseline levels upon discontinuation.[4]

References: **1.** Kales A, *et al*: *J Clin Pharmacol 17*:207-213, Apr 1977 **2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977 **4.** Kales A, *et al*: *Clin Pharmacol Ther 18*:356-363, Sep 1975 **5.** Moore JD, Weissman L: *J Clin Pharmacol 16*:241-244, May-Jun 1976 **6.** Spiegel HE: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **7.** Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, pp 641-646 **8.** Warfarin Study: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **9.** Baldessarini RJ: Drugs and the treatment of psychiatric disorders, chap. 19, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6. New York, Macmillan Publishing Co. Inc., 1980, pp. 391-447 **10.** Cole JO, Davis JM: Antidepressant drugs, chap 31.2, in *Comprehensive Textbook of Psychiatry II*, edited by Freedman AM, Kaplan HI, Sadock BJ, ed 2. Baltimore, The Williams & Wilkins Company, vol 2, 1976, pp. 1941-1956 **11.** Douglas WW: Histamine and 5-hydroxytryptamine (serotonin) and their antagonists, chap. 26, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6. New York, Macmillan Publishing Co. Inc., 1980, pp 609-646 **12.** Davis JM, Cole JO: Antipsychotic drugs, chap 31.1, in *Comprehensive Textbook of Psychiatry/II*, edited by Freedman AM, Kaplan HI, Sadock BJ, ed 2. Baltimore, The Williams & Wilkins Company, vol 2, 1976, pp. 1921-1940

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect.
Adults: 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients*: 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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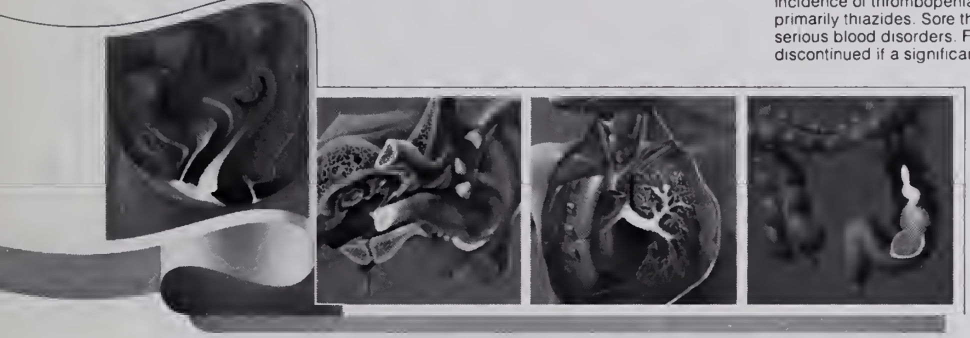
Bactrim™
(trimethoprim and sulfamethoxazole)
# succeeds

Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

Expanding its usefulness in antimicrobial therapy



in recurrent UTI... a continuing record of high clinical effectiveness against common uropathogens

in acute otitis media in children... effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults... clears the sputum and lowers its volume...on *b.i.d.* dosage

in shigellosis... faster relief of diarrhea than with ampicillin[2]

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae*. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

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1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

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*due to susceptible strains of indicated organisms

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4

Missouri Medicine

VOL. 79, No. 4 (ISSN 0026-6620) April, 1982

Potentiation and The Patient

By
Norman Cousins

Treatment of Ketoacidosis

Changing Laboratory Usage and Length of Stay Patterns in a University Hospital

The Cervical Cap

An Alternate Barrier Contraceptive

J. W. Burkey, M.D.

Named Editor of *Missouri Medicine*

Rheumatic Fever and Rheumatic Heart Disease in Missouri

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Missouri State Medical Association

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MSMA NEWS ROUND-UP

April, 1982

MSMA supports freedom of choice

Delegates to the Missouri State Medical Association's House voted to oppose any state regulation that restricts a patient's freedom of choice in seeking medical care.

The freedom of choice issue was among 21 resolutions considered by MSMA delegates at the Annual Convention. The meeting was held April 1-4 at the Hyatt Regency Hotel in Kansas City.

Free choice of physicians for all individuals has long been the policy of MSMA and AMA. The issue was brought up recently to show MSMA's disapproval of the Missouri Department of Social Services' program which requires General Relief recipients to obtain medical care from designated providers. The Department is currently seeking legislative authority to further extend this policy to all Medicaid recipients.

The physicians also joined the AMA in supporting continued federal and state subsidized, low interest loan programs for medical students. The resolution further called for proper enforcement of repayment.

A Medicine/Business Coalition will be formed in the near future as a result of the House of Delegates vote. An ad hoc committee will be responsible for organizing representatives of labor, business, medicine and insurance, who will eventually examine rising health care costs.

The MSMA House of Delegates also called for legislation which would establish strong immunization requirements for preschool children. Missouri is one of six states that does not have regulations requiring immunization of day care children.

Also adopted were the following resolutions:

- **Rehabilitation of Disabled Persons** — MSMA intends to work with existing organizations to remove physical and emotional barriers that prevent disabled people from working.
- **Study of HMOs, IPAs and Hospital Satellite Clinics** — MSMA will study, over the next five years, Missouri's development of these organizations.
- **Model Program Using Tax Credits or Deductions to Physicians for Care of Indigent Patients** — MSMA will work with the state and federal government in exploring better incentives for physicians who care for the indigent.
- **Cancer Reporting by Missouri Hospitals** — MSMA will support efforts to require hospitals to report to the state all malignant neoplasms with the exclusion of non-melanomatous cutaneous malignancies. This statistical data is necessary to determine relationships between cancer incidence and environmental factors and evaluate cancer control efforts in the state.
- **Dues Increase in 1983** — Annual dues will increase by $10, becoming $125 in 1983. Missouri still has the lowest state medical association dues in the nation.
- **Code of Medical Ethics** — Council will study the development of a Code of Ethics for MSMA.

The 124th Annual Convention of the Missouri State Medical Association was held April 1-4 at the Hyatt Regency Hotel in Kansas City.

- **Drugs of Abuse** — MSMA will support educational programs for junior high school students that will emphasize the hazards of drug abuse.
- **Retention of Missouri Health Data Corporation Data** — Missouri physicians will ask MHDC Board of Directors to retain control of their confidential information.
- **UCR Terminology** — MSMA will bring to the attention of local insurance carriers that some of their present communications concerning insurance benefits paid are misleading to the general public.
- **Reimbursement for Care Provided in Physician's Office** — MSMA will urge third party payers to provide economic incentives to physicians to encourage more in office care. MSMA will encourage third party payers to accept charges for services performed in physicians' offices.
- **Better State Hospitals** — MSMA, in conjunction with the Division of Health, will suggest more appropriate use of state hospitals.
- **Equal Service/Equal Fee** — MSMA will encourage the Division of Family Services to reimburse physicians equally for equivalent services, regardless of geographic locations.
- **FMG Representation on MSMA Council** — MSMA will encourage all minority groups to participate fully in the association but will not provide a "slot" for one particular group.
- **Need for Evaluation of Long-Term Health Policies** — MSMA will support AMA policy which asks all physicians to voluntarily do their part in helping the country to economically recover.

Dr. John Matthews takes MSMA gavel; Dr. I.H. Clark becomes president-elect

Dr. John I. Matthews, a Jefferson City internist, accepted the Missouri State Medical Association's gavel during the annual President's Banquet on April 3. The banquet was part of the 124th Annual Convention activities, April 1-4 in Kansas City.

Dr. Matthews succeeds Dr. Eugene T. Hansbrough, Poplar Bluff, in heading the association.

Dr. Irving H. Clark, Kansas City, was unanimously elected as MSMA president-elect and will assume the presidency during the 1983 Annual Convention.

Dr. Clark is immediate past chairman of the MSMA Council and has been a Councilor of the Seventh District. He has also been a member of the Board of Directors of the Missouri State Academy of Family Physicians.

In other elections, Delegates to the House elected three vice-presidents, three AMA delegates and three alternate AMA delegates. Dr. Jay Meyer, St. Louis, was re-elected Speaker and Dr. Barbara Buchanan, Kansas City, was re-elected Vice-Speaker.

The new officers are:

Vice Presidents

Dr. Byron E. Watts, Jefferson City
Dr. Vernon H. Balster, St. Louis
Dr. O.A. Griffin, Buffalo

AMA Delegates

Dr. Hugh E. Stephenson, Jr., Columbia
Dr. Francis X. Lieb, St. Louis
Dr. George M. Bohigian, St. Louis

AMA Alternate Delegates

Dr. Richard V. Bradley, St. Louis
Dr. Richard P. Bowles, Liberty
Dr. Andrew McCanse, Kansas City

Councilor district elections were conducted for those councilor terms which expired with this Annual Convention. The following Councilors are new or re-elected:

First District

Dr. Richard C. Hedges, North Kansas City

Third District

Dr. J. Otto Lottes, St. Louis
Dr. Theodore L. Paletta, St. Louis
Dr. Frederick D. Peterson, St. Louis

Fifth District

Dr. H. Peter Ekern, Mexico
Dr. Alan L. Braun, Jefferson City

Seventh District

Dr. Ronald A. Youmans, Kansas City
Dr. Milton B. Ozar, Kansas City

Eighth District

Dr. Marvin A. Singleton, Joplin

Ninth District

Dr. Jack Wiles, West Plains

Student Councilor

Tim Harwood, Columbia

The following vice-councilors were also elected:

First District

Dr. Gary A. Dyer, St. Joseph

Third District

Dr. Gerard M. Callaghan, St. Louis

Fifth District

Dr. Kenneth L. Rall, Columbia

Seventh District

Dr. James P. Hopkins, Kansas City

Eighth District

Dr. Francis M. Corry, Springfield

Ninth District

Dr. O. Martin Hasek, Mountain Grove

Student

Tom Reardon, Kansas City

In a Council meeting following the MSMA House of Delegates Session on April 4, the Council elected Dr. James Stokes, St. Louis, as chairman of the Council and Dr. Walter A. German, Springfield, as vice-chairman.

The Council also re-elected Drs. Carol F. Williams, St. Louis, as treasurer and B.A. Moranville, Columbia, as secretary of MSMA.

Foundation elects officers

The Missouri State Medical Foundation held its annual meeting April 2 at the Hyatt Regency Hotel in Kansas City. At that meeting officers were elected as follows:

Miles C. Whitener, M.D., St. Louis — President
Mary E.S. Case, M.D., St. Louis — Vice President
Robert H. Tanner, M.D., Jefferson City — Secretary Treasurer

The following physicians make up the board of directors: Drs. Gary A. Dyer, St. Joseph; Albert D. Cross, Trenton; Larry P. Courter, Jefferson City; Frederick W. Hahn, Kansas City; John P. Sargent, Sikeston; and Carl Pearman, Joplin. Dr. John I. Matthews, MSMA president, is an ex-officio member.

MOMEDICO officers and board members re-elected

Officers and Board of Directors of the Missouri Medical Insurance Company (MOMEDICO) were re-elected for one year terms during MSMA's Annual Session. Action took place at MOMEDICO's fourth annual shareholder's meeting at the Hyatt Regency Hotel in Kansas City.

Officers and Board of Directors are as follows:

Howard J. McAlhany, M.D. — Chairman
Irving H. Clark, M.D. — Vice-Chairman
Richard V. Bradley, M.D. — President and Chief Executive
Roger D. Detrich — Executive Vice-President and Chief Operating Officer
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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved Contraindicated during acute recovery phase following myocardial infarction
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e g , operating machinery, driving)

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives Concomitant use with other psychotropic drugs has not been evaluated sedative effects may be additive Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke
Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido
Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic. Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue
Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive I V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h.s* dose may suffice for some patients. Lower dosages are recommended for the elderly Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required Limbitrol 5-12 5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500, Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50

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* 1952 Intercompany Disability Table, Benefit 2, Age 35

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Photo-Comment by James W. Clawson, M.D., Springfield

Editor's Corner

AND A VERY PLEASANT GOOD EVENING TO YOU ALL!

I find a certain sadness in writing this final editorial. Maybe it is because writing editorials, or so-called editorials, has been the only time in my life I have said something and anybody paid attention, even to disagree.

I realize my stance has been inconsistent. Nobody can accuse me of being anti-doctor. I like doctors and, for the most part, agree with them. But I have lambasted medicine freely, and it needs it. I am, by no means, a socialist. I have occasionally voiced a notion tabbed by that label but I find socialists a pitiful, visionary and unrealistic lot. Nor can anyone say I am a capitalist because I find them all too often greedy. I am neither pro-one political party or anti-another because I find almost all politicians of the same sorry cut; self-serving and repugnant. Really, I guess I am simply dull, middle of the road, where most truth is.

Then why has it been all this much fun? Quite simple! This has been an opportunity for me to cement my own concepts of medicine, politics and sociology and to put a lifetime of thoughts into print.

So, it has really been a most enjoyable experience, you have been a kind and tolerant audience and I thank you.

As Will Rogers once commented, when he looked back on having been the spokesman for the common man for a generation, "I ain't goin' nowhere else, I already been."

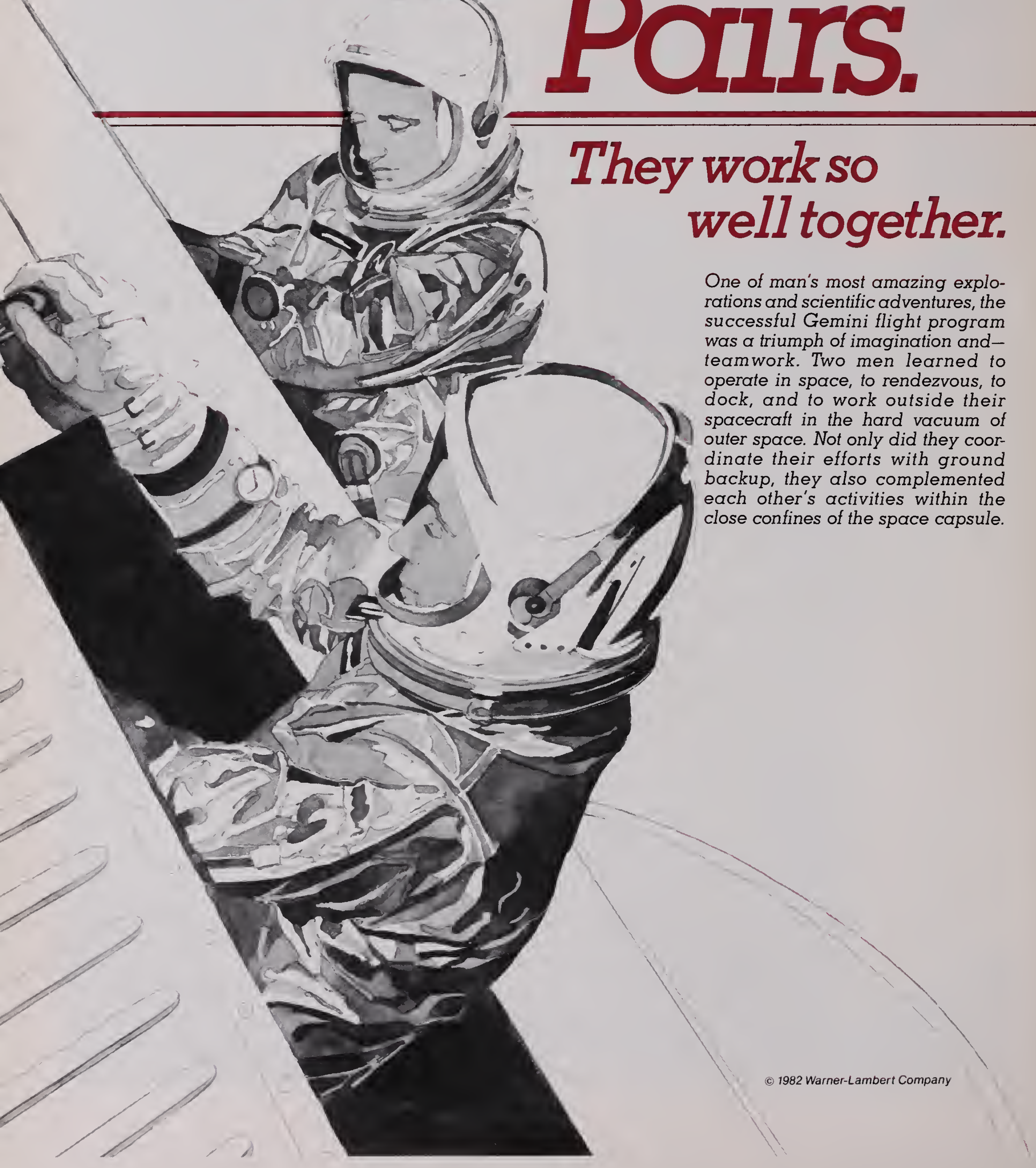
Myself, in a much more humble, but no less satisfying, position.

Wilfred E. Woolridge

Wilfred E. Woolridge, M.D.

Famous Pairs.

They work so well together.



One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.

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...another well-known pair that works so well together! Ninety-five percent of colon/rectal surgeons surveyed added Tucks pads concomitantly to hemorrhoidal treatment programs they recommended.*

TUCKS
Pre-Moistened Hemorrhoidal/Vaginal Pads
PARKE-DAVIS
Anusol-HC®
Rectal Cream with Hydrocortisone Acetate
Anusol-HC

Anusol-HC®
Suppositories/Cream
with Hydrocortisone Acetate

*The #1 physician-prescribed product for hemorrhoids and other common anorectal disorders***

☐ *Antiinflammatory, to relieve edema, burning, itching, pain*

☐ *Astringent, to help promote healing*

☐ *Emollient, for easier bowel movements and soothing relief of local trauma*

And, when pain is a special problem, Anusol Ointment offers the benefits of the anesthetic, pramoxine HCl.

TUCKS®
Pre-Moistened Hemorrhoidal/Vaginal Pads

The #1 hemorrhoidal pad† for added external relief and gentle cleansing of fecal residue

☐ *Soothes, cools, comforts the irritation and itch of hemorrhoids and other common anorectal disorders*

☐ *Hygienic rectal wipe—an integral part of the anorectal regimen*

Once pain and inflammation subside, for dual action recommend regular ANUSOL®—to maintain patient comfort—and TUCKS®—to maintain patient anorectal hygiene.

ANUSOL-HC® Suppositories/
ANUSOL-HC® Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F (15°-30°C)

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*Meeting of Am Soc Colon/Rectal Surgeons, May 1980.

**Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.

†1981 data from leading marketing research organization.

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• ***Serving MSMA Since 1943*** •

Dr. Jordan W. Burkey Named Editor Of *Missouri Medicine*

Dr. J. Bruce Stoliar to Serve as Associate Editor

Dr. Burkey

Dr. Jordan W. Burkey, Springfield, was appointed editor and Dr. J. Bruce Stoliar, St. Louis, was appointed associate editor of MISSOURI MEDICINE by the Executive Council of the Missouri State Medical Association on February 6.

Dr. Burkey will succeed Dr. Wilfred E. Wooldridge, Springfield, who has served as editor since 1978.

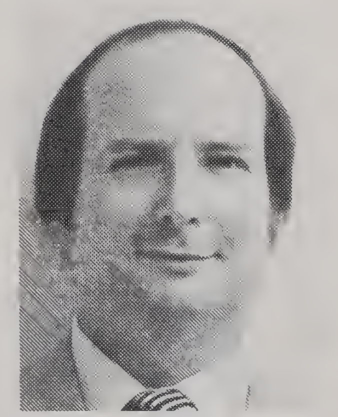
Drs. Burkey and Stoliar will assume their positions with the Journal for the May issue.

Dr. Burkey served on the editorial staff of the *Greene County Medical Society Bulletin* from 1974 to 1978 when he was named editor. He has retired from that editorship to accept the MISSOURI MEDICINE assignment.

Dr. Stoliar served as a member of the Publications Committee of the St. Louis Metropolitan Medical Society in 1979 and was chairman of that committee and editor of *St. Louis Metropolitan Medicine* in 1980 and 1981.

Dr. Burkey attended the University of Kansas where he received his M.D. degree in 1951. He served his internship at Bethany Hospital in Kansas City, Kan. in 1952 and was a resident in otolaryngology at Kansas University Medical Center from 1952 to 1955.

Dr. Burkey is Clinical Assistant Professor of Surgery (Otolaryngology) at the University of Missouri-Columbia, an associate staff member of the Missouri Crippled Children's Service and consultant for the Medical Center for Federal Prisoners in Springfield. He has served as chief of the medical staff at Cox Medical Center in Springfield; vice-president of the Kansas City Society of Ophthalmology and Otolaryngology and a physician member of the Missouri State Council for Hearing Aid Dealers and Fitters, Department of Consumer Affairs from 1979 to the present time.



Dr. Stoliar

Dr. Burkey also is on the active staff of St. John's Regional Health Center in Springfield.

His other professional memberships include the AMA, American Board of Otolaryngology, American Academy of Ophthalmology and Otolaryngology, Kansas City Society of Ophthalmology and Otolaryngology and the Missouri Ear, Nose and Throat Association.

His community activities include membership in the Springfield Rotary Club.

Dr. Stoliar attended the University of Texas in Austin in 1963 where he majored in philosophy and received his M.D. degree from Tulane University School of Medicine in 1967. His postdoctoral training and experience include a Fellowship, Department of Surgery, Tulane University, Shock and Trauma Laboratory 1967-1968; internship, rotating surgical, Ochsner Foundation Hospital in New Orleans, 1968-1969; active duty at the United States Army Hospital in Fort Polk, La., 1969-1971; residency in general surgery, University of Minnesota, 1971-1972; Fellowship, urologic oncology, Roswell Park Memorial Institute, Buffalo, N.Y., 1972-1973; and residency in urology, State University of New York in Buffalo. He specializes in urology and genito-urinary surgery.

Since joining the St. Louis Medical Society in 1978, Dr. Stoliar's other committee assignments have included the Alcoholism, Drug Abuse and Smoking Committee; School Health Committee, Medicare and Medicaid Committee and Membership Development Committee.

He served on the Program Committee of the St. Louis Society for Medical and Scientific Education from 1979 to 1981 and has been a member of that organization's Board of Trustees since 1980.

Dr. Stoliar's professional memberships also include the AMA, Southern Medical Association, American Physician's Art Association (vice-president in 1982) and the American Medical Writer's Association.

His community activities and hobbies include Parent and Child Saint Louis, photography and short story and novel writing.

> Blundering experiments in legislation cannot be simply abandoned if they do not work well; even if they are set aside they leave their effects behind, and they create vested interests which make it difficult to set them aside.
>
> —W. G. Sumners — Federal Legislation on Railroads, 1887.

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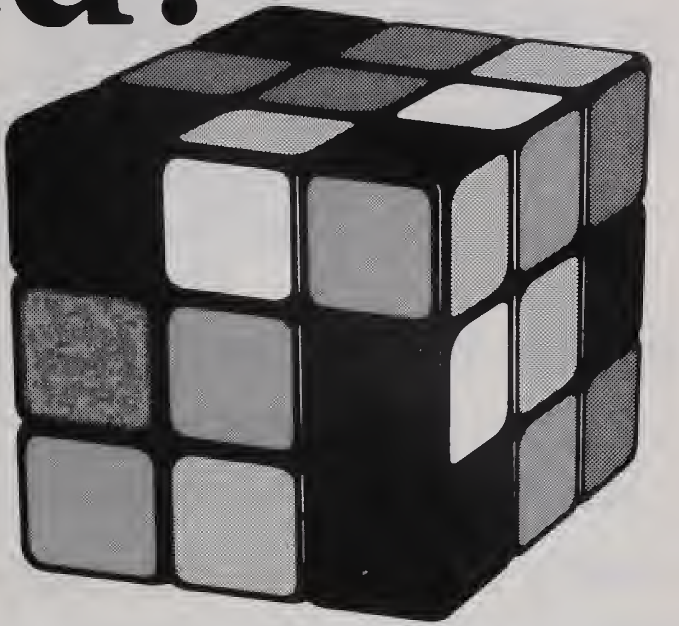

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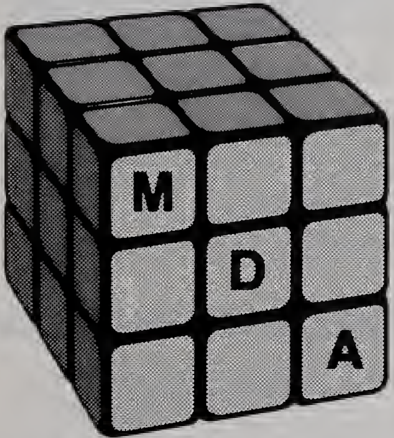

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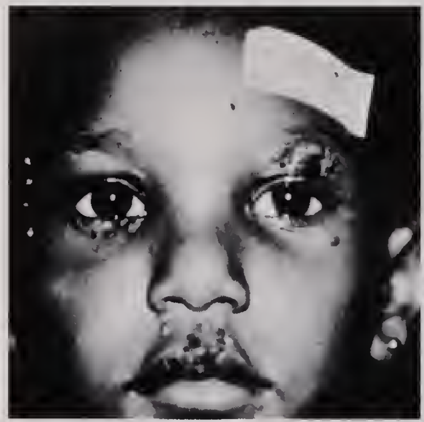
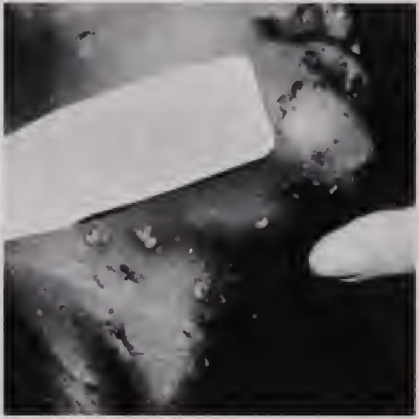
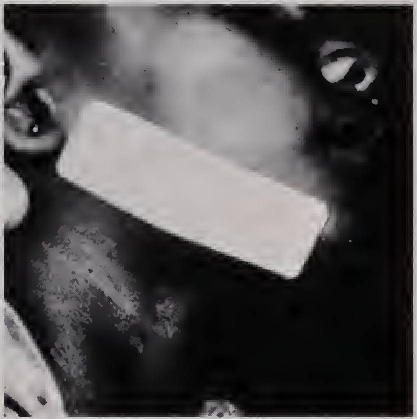
In the treatment of impetigo-

- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**


As seen on admission


After one week of penicillin V-K therapy


Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. *No* treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular. (12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

RESULTS OF ORAL THERAPY revealed a high percentage of treatment failures with penicillin V potassium, but *no* failures with Tegopen.

		Given Tegopen® *(cloxacillin sodium)*	Given *penicillin V-K*
Staphylococcus aureus	(78 patients)	39	39
Returned to clinic at one week		29†	38†
Treatment failure at one week		0	18 (47.4%)
Staphylococcus aureus* and *Streptococcus pyogenes	(9 patients)	4	5
Returned to clinic at one week		4	5
Treatment failure at one week		0	2 (40%)
No initial bacterial growth	(14 patients)	9	5
All 14 healed, regardless of which antibiotic was administered.			
Beta-hemolytic *Streptococcus*	(1 patient)	0	1
TOTALS:	**102 patients**	**52 patients**	**50 patients**

†Eleven patients did not return for their one-week checkup. These were all called by telephone, and their families reported the lesions had healed. One patient was dropped from the study, early, because of adverse reaction to medication.

STUDY: DESCRIPTION/PROTOCOL

- 102 nonselected subjects, with initial bacteriology as follows: 77% *Staphylococcus aureus,* 9% mixed *Staphylococcus aureus* and *Streptococcus pyogenes,* and 1% beta-hemolytic *Streptococcus*.‡
- All patients were given randomized therapy—Tegopen capsules or oral solution, or penicillin V-K tablets or oral solution, in recommended dosages according to body weight.
- All patients were evaluated after one week's therapy. If there was no improvement, therapy was switched to the other antibiotic. The "other antibiotic" proved to be Tegopen 100% of the time because no treatment failures had occurred with Tegopen.
- A final assessment of progress was made two weeks after initiation of Tegopen therapy.

‡The remainder, to equal 100%, consisted of 14 patients (13%) who exhibited no initial bacterial growth. These 14 were all healed, whether given Tegopen or penicillin V-K.

TEGOPEN®
(cloxacillin sodium)
–effective therapy for staph infections of the skin and skin structures

---

WARNING:

Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

PRECAUTIONS:

The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

ADVERSE REACTIONS:

Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGDT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

USUAL DOSAGE:

Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

SUPPLIED:

Capsules—250 mg. in bottles of 100. 500 mg. in bottles of 100.
Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

BRISTOL®

Bristol Laboratories
Division of Bristol-Myers Company
Syracuse, New York 13201

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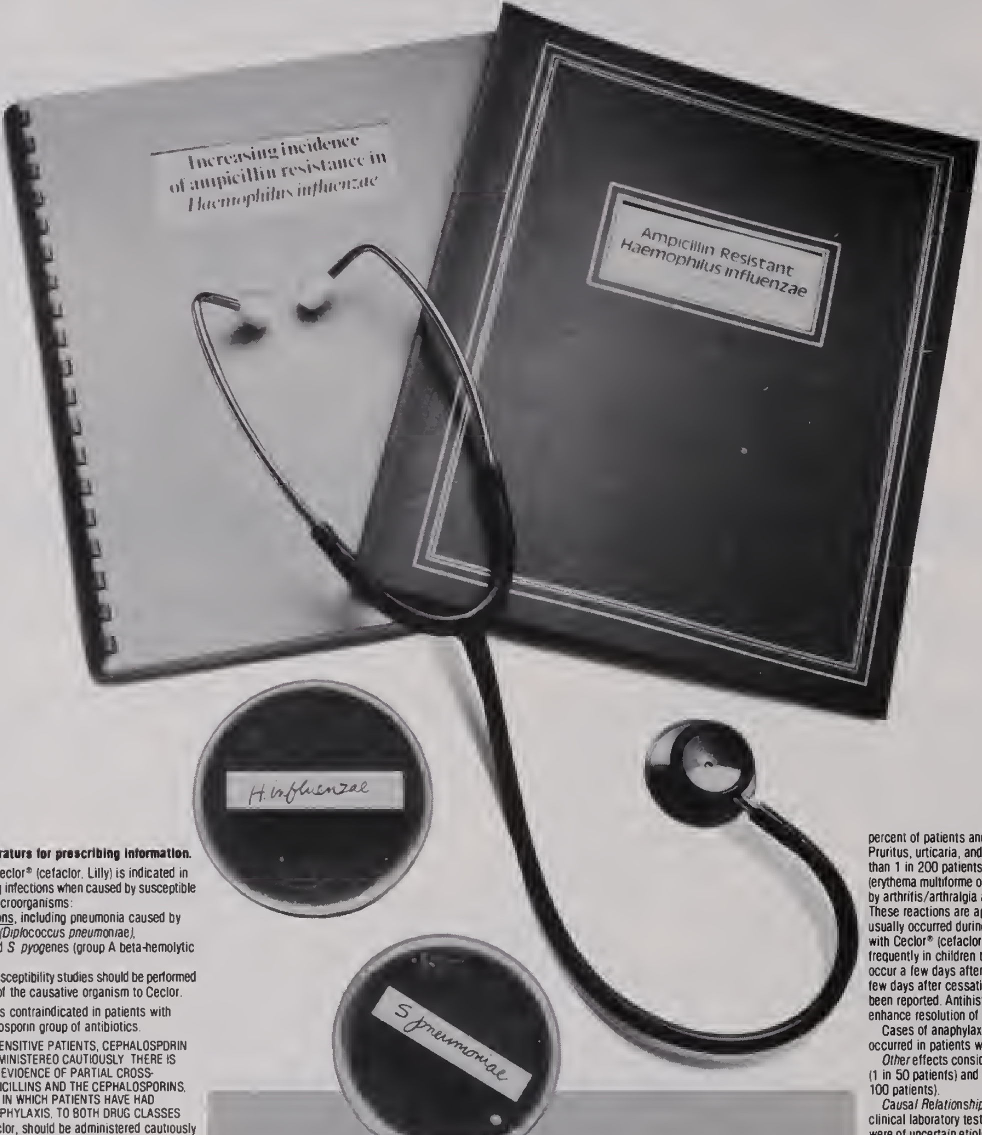
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S pneumoniae

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly)

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2 5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H. influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information.

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Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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Special Article

Potentiation and the Patient

By
NORMAN COUSINS

I THINK THE FINEST tribute I have ever seen to an American surgeon was contained in a film aired by public television in January and February, 1980, called "Joan Robinson: One Woman's Story." It is the story of a woman's fatal bout with cancer. Last October, I participated in a taped panel discussion that was shown after the film.

A poignant part of the film described a letter that the woman had left behind and that was read at her funeral. The letter contained the tribute to her surgeon that I find unforgettable. The sense of that letter was that it is important for cancer patients to know that, although an illness may be fatal, life need not be solemn, that life can go on and be rewarding, things can be achieved, there are emotions to be felt, and people to be loved. Then she said, "I would like to thank my surgeon. I just hope that every patient who is terminally ill may have someone just like him, because he got the most out of me." [Her surgeon was Dr. Peter Mozden, a Fellow of the College and professor of surgery and director of surgical oncology at Boston University School of Medicine.]

Joan Robinson was first given a prognosis of six months to live. She survived for 22 months, but they were not all months of unrelieved horror. During that period, she was able to function moderately well much of the time, to learn things that she wanted to share with other people and to be a loving wife. She was the one who insisted that the film be made because she thought it might be helpful to other patients.

Doctor-patient Partnership

The central characters of the film were Joan and her surgeon. Because her surgeon was more than a man with a knife, he paid attention to the condition of her psyche. He created a context in which she could deal with her problem. He was there when she needed him.

We see discussions in the film between the surgeon and his patient in which the surgeon is able to make distinctions. He knows that the principles of treatment must vary with the personality and condition of the patient. He doesn't regard truth-telling as an absolute; he doesn't use truth as a bludgeon; he doesn't hit the patient with truth and run. Quite the contrary, he uses truth proportionately, in stages, and in a way that is proportionate to the circumstances. The surgeon has analyzed not just the patient's physical needs but her psychological needs.

When the physician tells the truth, he is careful to do so in a way that does not deprive his patient of hope. Nothing he can do is more important than to enable the patient to be "potentiated"; that is, to make her feel that she has something of her own to contribute, that she is involved in the decision-making, and that she will be informed in a way that will enable her to make responsible choices. In short, he attempts to create a partnership.

There was, however, one thing about Joan Robinson's experience that disturbed me greatly. About three months before she died, when her condition was advanced, she developed a fever. Her surgeon was away at the time, and an internist tried to establish the cause of the fever. He knew of her condition, but he nonetheless subjected her to a battery of tests that even a well person would have found pulverizing. She was within months of death but was given a gastrointestinal series and was aspirated. Apparently, the most important thing was the diagnosis; the pain caused by these procedures was of little consequence to the hospital staff. I suppose the internist felt his duty was to obtain as much diagnostic information as possible, but what about the context? What about the patient?

POTENTIATING THE PATIENT

Let me give you another illustration, and I apologize for being anecdotal. Not long ago, I received an invitation from a doctor in Denver to review the case of one of his patients who had primary cancer of the prostate. The doctor said that something interesting had happened that I might find of value because it would reinforce my own ideas about the importance of the patient's attitude.

EDITOR'S NOTE

MISSOURI MEDICINE is very pleased to reprint the lecture of Norman Cousins which was a featured address at The American College of Surgeons Clinical Congress in Chicago in October, 1979. This was The American Urological Association Lecture.

Norman Cousins is a leading American man of letters, humanitarian, former editor of *The Saturday Review* and is now senior lecturer in medical humanities in the School of Medicine of the University of California, Los Angeles.

As one might expect, Cousins' message is one of deep concern for the patient, for the physician and for their interrelationship. With this feeling, he reflects his own experience with ankylosing spondylitis and his recovery from that crippling disease.

This article is a condensation of Mr. Cousins' remarks and is an unchanged version of those appearing in the June, 1980 issue of *The Bulletin of the American College of Surgeons*. We are indebted to that journal for permission to reprint.

I went to Denver and was shown the x-rays of a 53-year-old man whose prostatic cancer had metastasized throughout his body. The scan showed more than 200 lesions from his toes to his skull. I asked the doctor how long the man had to live, expecting him to say four or five weeks. Instead, he showed me a scan of the same patient taken nine months later. The second scan showed that more than half of his lesions had disappeared. What happened?

The doctor invited me to ask the patient directly and called him in. In came the patient — tall, robust, tanned and grinning. The doctor said, "Gordon, Mr. Cousins would like to know what you think happened."

The patient replied: "When the doctor took the first scan he sat me down and said, 'Gordon, I've got something serious to say. Your x-rays show that your prostate cancer has metastasized. That means it has spread. This is serious, but it's important for you to know that remissions from this condition have been reported in the medical journals. I want you to be one of them. It may be a long shot, but I think you've got what it takes.

"Gordon, we've both got a job to do. I'll tell you about my job, then I'll tell you about yours. My job is to try to knock out the male hormone. I'm going to give you estrogen. I may have to perform an operation; as to that, I cannot say for sure right now. Now about your job: Your job is to give me a field to work in. By that I mean I will do a much better job if your will to live is fully mobilized.

"And, Gordon, although this may seem rather strange and bizarre, I want you to have the best time of your life. This may seem incongruous to you, but your life may depend on it. I want you to do everything you ever wanted to do. I want you to laugh each day. There is a good physiological reason for that: I want you to enhance your respiration; I want you to be full of life and confidence. If you can do that, my job will be made easier. No guarantees, but we may have a chance.' "

The patient said that he went out of the office feeling ten feet tall. His doctor had given him something to do that was within his capability. Within a few months, the patient said, he stopped losing weight and began to feel stronger. He telephoned his doctor and told him, "I think we are beginning to get good results."

The doctor replied, "Of course you are. You have shown improvement month by month."

That man is still alive and robust today. He still has his cancer, but some people carry serious illness around inside of them for a long time.

Some cancer patients even reach a stage at which that magical and mysterious remission takes place. One of the most important things I've learned is that no one really knows enough to make a pronouncement of doom on a human being.

Mind and Body

It is commonplace now to say that the mind and the body are really one. Hippocrates was the first to recognize it. I believe a connection exists between creativity and longevity, and that people can live many years with illnesses if they have a desire to go on living.

Years ago I visited the great cellist, Pablo Casals, at his home in Puerto Rico. He was then 89, and suffered from emphysema, rheumatoid arthritis and cardiac insufficiency. On the first day of my visit, early in the morning, he came into the living room to greet me. He was on the arm of his wife. He was stooped; he shuffled; he wheezed; his arms were pressed close to his sides; his hands were clenched. It broke my heart to see this great man in the grip of all of those infirmities. Then he sat down at his piano. As he lowered his head toward the keyboard, his fingers began to open and his back began to straighten. When his hands settled over the keyboard, they were fully extended. Within a few seconds, his hands were racing over the keys playing a Brahms concerto. When he finished the piece, he put his hand to his heart and said, "Brahms for exercise, now Bach for the spirit."

He then proceeded to play the Toccata and Fugue in D Minor with complete precision and all of the gradations, nuances and control that the piece requires. Then he stook up fully erect and walked briskly to the breakfast table. He had a full breakfast, then went out to the beach for a long walk. Later, he returned, practiced, took care of his correspondence, had lunch and took a nap. After his nap, his body began to close up again, not as badly as in the morning, but he was wheezing again and his hands were clenched.

His wife said to him, "Don Pablo, you must prepare yourself for the crew from public TV. They will be here very shortly to film your master class."

"Oh, no," he said, "I can't do it today. I'm just not up to it. Telephone them and tell them to come back some other time."

"Don Pablo," she said, "they are on their way. They will be here within 15 minutes. There is no way of calling them off."

Norman Cousins

"When they get here, send them away," he said.

"But Don Pablo," she replied, "you don't want to disappoint those young people, especially that lovely girl with the golden hair and the curls that you liked so much the last time."

His eyes brightened and he said, "Is that lovely young lady going to be here again?" Within two minutes he was at his cello sawing away with the control and muscularity of a man of 30.

No one could witness this scene without recognizing that Casals was making his own cortisone and that the combination of creativity and anticipation produced certain chemical changes that enabled him to function. And that is how he went on functioning day after day. I saw the same thing at the clinic of Dr. Albert Schweitzer in that same year. He was the same age as Casals at that time, and he lived to be 95.

Involving the Patient

I am not a doctor but I have had some medical experience as a patient. During my illness, I was fortunate in having the kind of doctor that Joan Robinson had. He tailored his prescriptions to suit me and involved me fully in the treatment. Responding to my excitement and, indeed, passion at being involved, he encouraged me to speculate about my condition, what might have caused the problem, and what might be done to improve my condition. His encouragement was as powerful as any medication he could have given me.

I had read Hans Selye's book, *The Stress of Life*,[4] about ten years earlier. In it, he showed that adrenal exhaustion could be caused by emotional tension, such as frustration or suppressed rage. He discussed the negative effects of negative emotions on body chemistry. I concluded it was only reasonable to believe that if negative emotions produced negative chemistry, then positive emotions would produce benevolent chemistry. It was possible, I reasoned, that love, hope, faith, laughter, confidence and the will to live had therapeutic value.

My doctor encouraged me in this direction. I had little incentive at the time to laugh; even a bedsheet felt like a slab of cement on my body. So we began a systematic program of using funny movies — Candid Camera episodes, the Marx Brothers, and others — to get me laughing. The program worked. We found that ten minutes of genuine belly laughter would give me at least two hours of pain-free sleep.

Benefits of Laughter

Dr. Fry of Stanford published a striking paper in 1971 on the physiological benefits of laughter.[5] He noted that it enhanced respiration and combated carbon dioxide levels in the blood. In my own case, hearty laughter was a tonic. Not much was known about endorphins at that time, but in retrospect it seems clear that my body was producing a natural anesthesia. I was able to cut back sharply on pain-killing medication.

In order to determine how therapeutic the program was, we took sedimentation-rate readings immediately before the laughter and about two hours later. Each time, there was a drop of at least five points, and the drop was cumulative and it held. The evidence that attitudes could affect the course of my illness was a powerful regenerator.

I don't think people recognize the extent to which a doctor's verdict can cause panic or the extent to which panic can be a multiplier of disease. Not all people are capable of absorbing the truth in the same way. Truth must be shared with patients, of course. In my case, I was given one chance in 500 of recovering, but I didn't care about the odds. The important thing was that a chance did exist. The fight was the thing; the fight was an end in itself. This is the discovery that Joan Robinson made in her life and the reason why she paid that magnificient tribute to her surgeon. Both her doctor and mine got the most out of us.

Walter Cannon, who wrote *The Wisdom of the Body*,[6] once made a study of voodoo doctors. He was interested in how hexes worked. He was struck by the fact that a voodoo doctor could predict to a native that that native would die, say, within three hours after the full moon rose, and that at precisely the appointed hour, the native would die. Cannon went to Haiti to probe the phenomenon. He found that it was not a hex that killed the native, but that the native killed himself. The native's will to die replaced his will to live. He had been given an appointment with death, he prepared his body for it, and he kept the appointment.

It seems very clear, therefore, that people can be programmed to die. If people can be programmed to die, they can also be programmed to live. I can think of no greater privilege for any physician or surgeon than to program people to live.

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Treatment of Diabetic Ketoacidosis

Changing Laboratory Usage and Length of Stay Patterns in a University Hospital

> "Good medicine does not consist in the indiscriminate application of laboratory examinations to a patient but rather in having so clear a comprehension of the probabilities of a case as to know what test may be of value . . . it should be the duty of every hospital to see that no house officer receives his diploma unless he has demonstrated . . . a knowledge of how to use the results in the study of his patients."
>
> G. W. Peabody, 1922[1]

The cost of health care is rapidly increasing in the United States. Growing at an annual rate of 11% during the decade 1966-1976, annual medical costs are expected to reach $247 billion in 1980 and, if this rate is not altered, to exceed $1 trillion by 1990.[2, 3]

The largest proportion of the health care bill is hospital costs. Expanded use of diagnostic tests and increased periods of hospitalization have contributed importantly to the increase. Several studies have found a longer duration of stay and higher laboratory usage in teaching hospitals as compared to their nonteaching counterparts.[4, 5] In addition, Schroeder and O'Leary found that although the length of stay was similar in teaching and nonteaching institutions, laboratory usage was notably higher in the university hospital.[6] Herein, we report a retrospective study contrasting laboratory usage and length-of-stay patterns for the separate years of 1975 and 1980 in the therapy of diabetic ketoacidosis in a university hospital.

Methods

Truman Medical Center is the primary teaching hospital of the University of Missouri-Kansas City School of Medicine. Eight patients admitted in 1975 were included in the study, whereas nine patients were included from 1980. Several patients in both periods were under the supervision of full-time faculty who were board certified or board eligible in endocrinology. All cases fulfilled the following criteria for diabetic ketoacidosis:

1. Arterial pH of 7.30 or less, serum glucose of 300 mg% or more.
2. Serum bicarbonate concentration of 15 mEq/L or less, glycosuria.
3. A positive nitroprusside (acetest) reaction in either serum or urine.

Precipitating illnesses were similar in the two groups with either noncompliance or infection listed as a secondary diagnosis in all patients. Days in the intensive care unit were comparable in the two groups. All patients were admitted to a general internal medicine service which included a full-time attending faculty member, a second- or third-year resident in internal medicine, two first year residents, several medical students and a clinical pharmacist.

The following characteristics of patient care were analyzed: age, sex, length of hospitalization, noninvasive and invasive x-ray procedures. The following are laboratory determinations: arterial blood gas, serum glucose, SMA-6 (sodium, potassium, chloride, bicarbonate, glucose, blood urea

This study contrasts laboratory usage and length of stay patterns for the separate years of 1975 and 1980 in the therapy of diabetic ketoacidosis in a university hospital. The period of hospitalization was increased in the 1980 group as compared to 1975 by 5.32 days to 4.50 days, an 18.22% increase. In addition, the average number of tests per patient was increased in the 1980 group by 43.61 to 36.39, a 19.84% increase. The increase in laboratory usage and length of stay did not have any apparent effect on clinical outcome.

Dr. Hamburger is Associate Professor of Medicine and Mr. Soffer is a Medical Student at the University of Missouri-Kansas City School of Medicine.

TABLE 1
TREATMENT OF DIABETIC KETOACIDOSIS IN AN INTERNAL MEDICINE RESIDENCY PROGRAM

	1975	*1980*
Number of patients:	8	9
Sex:		
Male	100%	78%
Female		22%
Average age, years (range)	31 (19-52)	36 (17-48)
Length of stay, days	4.50	5.32
Average number of consultations	0.38	1.00
Average number of noninvasive x-rays	0.87	1.00
Average number of invasive x-rays	0.0	0.11
Average number of arterial blood gases	2.88	2.45
Average number of serum glucose tests (range)	8.25 (7-15)	17.41 (7-36)
Average number of serum electrolytes	4.63	2.10
Average number of complete blood counts	1.75	1.90
Average number of urinalysis tests	1.38	1.33
Average number of SMA-12	0.62	0.44
Average number of SMA-6	0.63	1.55
Average number of serum potassium tests	0.0	3.45
Average number of nitroprusside tests (range)	6.63 (1-14)	4.10 (1-10)
Average number of urine cultures	0.25	0.56
Average number of EKGs	0.75	1.21
Average number of miscellaneous tests	7.75	5.00
Average number of total tests per patient	36.39	43.61

nitrogen), SMA-12 (calcium, phosphate, total protein, albumin, cholesterol, bilirubin, lactic dehydrogenase (LDH), serum glutamic-oxaloacetic transaminase (SGOT), blood urea nitrogen (BUN), uric acid, alkaline phosphatase, glucose), serum potassium, nitroprusside (acetest) determination, urinalysis, urine culture, electrocardiogram, complete blood count, serum electrolytes (sodium, potassium, chloride bicarbonate) and miscellaneous tests. The average number of tests per patient was determined. Invasive x-rays were defined as any roentgenographic procedure in which the patient received an injection or an oral tracer, such as barium. There were no deaths in either group.

RESULTS

The results are shown in Table 1. The period of hospitalization was increased in the 1980 group as compared to 1975 by 5.32 days to 4.50 days, an 18.22% increase. In addition, the average number of tests per patient was increased in the 1980 group by 43.61 to 36.39, a 19.84% increase.

DISCUSSION

Increased utilization of laboratory tests and diagnostic procedures in a university setting has been well documented. Data by Griner and Liptzin suggest that medical housestaff utilize laboratory studies too frequently and often with questionable relationship to patient care.[7] In addition, Dixon and Laszlo found that internal medicine residents ordered laboratory tests, both initial and followup, with excessive frequency.[8] Only 5% of the chemistry determinations actually altered patient care. Lastly, Schroeder and colleagues found a large variation in laboratory (12-fold) use among 33 internists in a university clinic.[9] Interestingly, Garg and colleagues discovered that 11% of tests ordered in teaching institutions were for educational purposes only.[10] Both our study and an earlier one by Griner have documented an increasing use of laboratory studies that have apparently had no effect on clinical outcome in the management of diabetic ketoacidosis.[7]

Physician behavior may be modified. Griner and Eisenberg, in separate studies, have shown that physician education may modify laboratory usage.[11, 12] The former demonstrated that a housestaff education program stabilized or decreased the growth of laboratory tests and radiological procedures over a seven-year period at a university hospital whereas the latter showed that an educational program decreased the use of the prothrombin test by 36%. In addition, Lyle and associates have shown that both laboratory usage and period of hospitalization may be decreased in an internal medicine residency training program.[13] Lastly, Martin and associates have recently shown that daily chart review is particularly effective in reducing laboratory utilization.[14] These studies reveal that behavior is best modified by continual reenforcement. For this reason, education in the cost effectiveness of medical care should begin early in a physician's training. It is accordingly disconcerting to note that a survey in 1978 by the American Association of Medical Colleges showed that only 34% of medical schools had an ongoing or planned program in cost containment.[15]

Examples of possible cost effectiveness are revealed in the present study. In both groups, the most frequently ordered tests were serum glucose and the nitroprusside (acetest) reaction. In most instances during therapy of diabetic ketoacidosis, an approximate glucose level would have been sufficient. Two tests strips, Dextrostix® and Chemstrip,® which give visual approximations of serum glucose levels, are now available. Either method is much less expensive than a serum glucose level. In addition, although a positive nitroprusside (acetest) reaction is a standard procedure in the diagnosis of diabetic ketoacidosis, its role in the management of this illness is greatly limited. The nitroprusside (acetest) reaction measures acetoacetate and to a lesser extent acetone; it does not measure betahydroxybutyrate. Early in the therapy of diabetic ketoacidosis, the acetoacetate concentration may transiently rise. Thus, despite an otherwise successful clinical and biochemical recovery, the nitroprusside (acetest) reaction may actually worsen.[16, 17]

In summary, it was found that in the therapy of diabetic ketoacidosis, utilization of laboratory tests and diagnostic procedures increased during a five-year period in a university hospital. In addition, the period of hospitalization lengthened. Nevertheless, no discernible improvement in clinical outcome was noted. It therefore seems evident that in some university hospitals, laboratory use and diagnostic procedures in diabetic ketoacidosis may be utilized unnecessarily, and patients with this disorder may be hospitalized for longer periods than necessary.

These results were found in one academic center. Interestingly, the word "academic" is defined as "very learned but inexperienced in or unable to cope with the world of practical reality."[18] Because of the philosophy of "defensive medicine," cost-effective medical care is frequently hard to practice in today's medical environment. Hopefully, this attitude will be overcome because in my opinion it is cost-effective medical care that links the physician to the needs of the community on the one hand and to the needs of the patient on the other. The superior physician is alert to both of these aspects of medical care.

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> *A nation never falls but by suicide.*
> — R. W. Emerson
> Journal, 1861

WILLIAM M. GILBIRDS, II *and*
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The Cervical Cap

An Alternate Barrier Contraceptive Method

ALTHOUGH THE ORAL CONTRACEPTIVES and the IUD are generally regarded as the most effective contraceptive methods, concern over their side effects has prompted a new review of contraceptive technology to provide alternatives to the above methods. At the forefront of these alternatives are the barrier methods. Barrier methods are generally regarded as the contraceptive method with the fewest adverse side effects. This review article examines the cervical cap as an acceptable addition to barrier method technology.

HISTORY

The idea of capping the cervix with an occlusive device is not a new one. The 18th century Italian adventurer Casanova is alleged to have used half a hollowed-out lemon as a cap to cover the cervices of his sexual conquests.[1] Invention of the modern cervical cap occurred in the mid-1800s. Finch[2] states that the first cervical cap was described in 1838 by Friedrick Adolphe Wilde, a German gynecologist. He called it a Cautchuk Pessarium and each cap was custom made from a wax impression of the woman's cervix. Lehfeldt,[3] however, credits E. B. Foote, a New York physician, with inventing the cap in 1860.

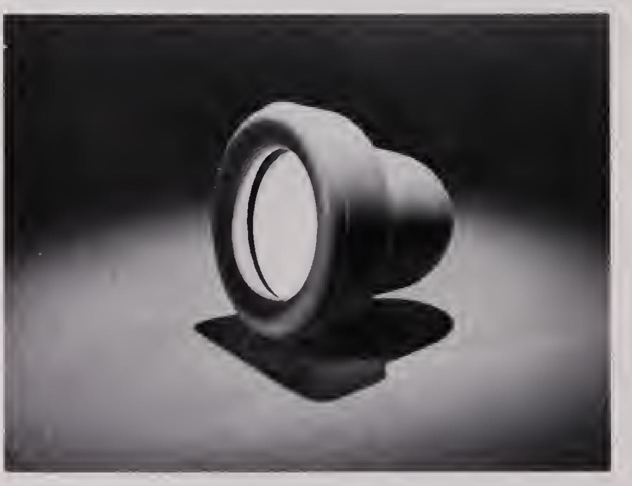

Fig. 1 28 mm Lamberts Cap.

No matter whom is credited with the invention of the cap, it remained a widely used method of contraception for the next century although principally employed in Europe. Dickinson[4] reported that in Germany in 1926, the acceptance of cervical caps was such that the firm caps outsold diaphragms four to one. Currently, cervical caps are widely used in England and Central Europe.[5] Use of the cap in the United States has been limited by the small amount of data on its demonstrated effectiveness as well as most clinician's belief that the method is too complicated for the average woman.[6] Currently, the cervical cap is classified by the FDA as a Class II (experimental) contraceptive device.[7]

METHODOLOGY

There are two primary types of cervical caps: firm and soft rubber. Firm caps have previously been made of resin, celluloid, ivory and metals including gold, silver, platinum, stainless steel and aluminum.[8, 9] More recently, firm caps have been made of lucite plastic. Presently, the only manufacturer of caps is Lamberts (Dalston) Limited in London, England. Lamberts supplies a soft rubber cervical cap in four sizes: 22 mm, 25 mm, 28 mm and 31 mm[10] (Fig. 1).

For the cap to be effective, it must be fitted by trained medical personnel. It is necessary for the rim of the cap to approximate the circumference of the base of the cervix. It is also important that the cap fit evenly and not be in contact with the cervical os.[11] After speculum examination of the vagina is completed, the clinician should estimate the size of the cap needed via visual approximation. Most women can be properly fitted using one of the four sizes: 22 mm, 25 mm, 28 mm and 31 mm.

For maximum effectiveness, it is imperative that the cervical cap user master the techniques of self insertion and removal. Most sources recommend that prior to insertion, the cap be approximately one third filled with spermicidal cream or jelly. However, Lehfeldt[12] studied the use of spermicides with the cervical cap and concluded that the cap is effective without the addition of the spermicide. This is possible since the mechanism of the cap is predominantly occlusive rather than through cervical contact with the spermicide.

Whether or not a spermicide is used, the woman assumes a semi-reclining or squatting position. Two fingers of one hand are used to separate the labia, while the cap is held dome down between the index and middle fingers or the index, middle finger and thumb of the opposite hand (Fig. 1A). The rim is compressed if it is of the soft rubber variety. The cap is then inserted into the vagina following the posterior wall to the posterior fornix (Fig. 1B). The cap is then released and will almost automatically slip over the cervix (Fig. 1C). The cap must remain in place six to eight hours following intercourse, a minimal time for the elimination of viable sperm. If desired, the cap may remain in place the full length of the intermenstrum, although many researchers advocate removing the cap following intercourse to prevent a malodorous secretion from accumulating in the cap.

The removal of the cap is facilitated by inserting the index and middle fingers into the vagina and tilting the rim of the cap away from the cervix, thus breaking the suction (Figs. 2A & 2B). The cap can then be easily removed via the inserted fingers (Fig. 2C).

This article presents an updated review of the literature on a barrier method of contraception, the cervical cap. As systemic effects of other contraceptive methods cause concern to patients seeking family planning methods, it is desirable to reevaluate and develop new technology in the field of barrier contraception. The authors emphasize the need for further research in evaluating utilization techniques, contraindications and side effects of this particular technique.

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Although the procedure for cervical cap insertion is slightly more complicated than that for the diaphragm, it is no more difficult or time consuming to teach than the insertion procedure for the diaphragm.[13] It should be noted, however, that self-insertion of the firm cervical cap is slightly more difficult to teach than for the soft-rubber type.

Contraindications and Side Effects

The following conditions contraindicate the use of the cervical cap: cervical erosion or laceration, cervical malformation (including an unusually long or short cervix), Nabothian cysts, inflammation of the adnexa or inability of the woman to place and remove the cap correctly.

In terms of side effects, barrier methods have a distinct advantage over other forms of contraception, causing no systemic complications. Of the two intravaginal contraceptives, the cervical cap is superior to the diaphragm for two reasons: (1) the cap is held in place deep in the vaginal canal via suction and is less likely to be dislodged dur-

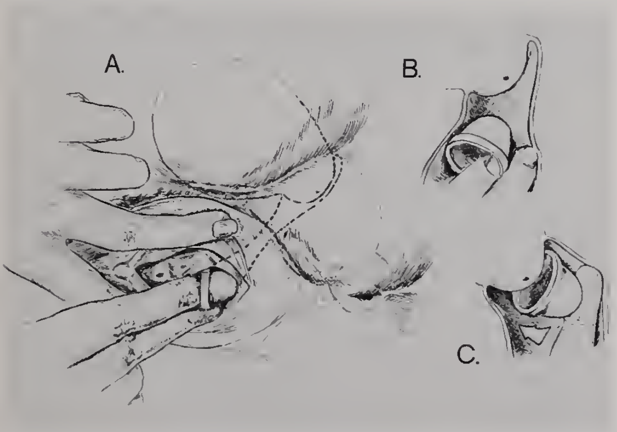

Fig. 2 (A) Hand position for insertion of cap. (B) Vaginal insertion of cap. (C) Cap covering cervix.

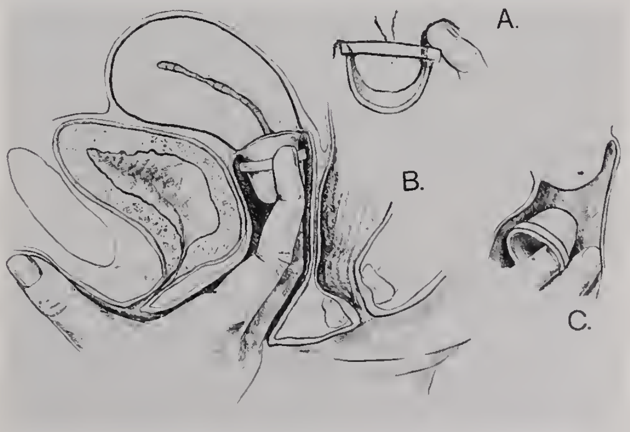

Fig. 3 (A) Breaking suction. (B) Pulling cap off cervix. (C) Removing cap via inserted fingers.

ing intercourse,[14] (2) longer wearing period is possible with the cap. Also the cap may be the intravaginal method of choice when a diaphragm is inappropriate due to an anatomic anomaly.

The only reported side effect of the cap is the presence of a malodorous secretion if the cap is left in place longer than 24 hours. It should be noted, however, that this discharge is not associated with any deleterious effects.

EFFECTIVENESS

Unfortunately, the clinical effectiveness of the cervical cap as a contraceptive device has had limited study and evaluation. Of the three comprehensive studies in literature, all have evaluated only the firm cervical cap. No studies have yet been published evaluating the soft rubber cap. In 1937, Stone reported a failure rate of 4.5%, while in 1949, Lehfeldt reported a failure rate of 5% with an average observation period of 18 months. Tietze, in 1953, reported 7.6 pregnancies per 100 women years, which corresponds to a failure rate of 2%.

A recent preliminary report of the effectiveness of the soft cervical cap was published by Smith.[15] In her study of 34 female college students with a mean age of 23 years and a mean follow-up period of 11 months, she found the following: of the 34 participants, there were 24 who had been regular users of the cap and had used it exclusively. Of these 24, seven users became pregnant during the follow up time of the study. In an unpublished study from Population Dynamics in Seattle, Wash., Dr. George C. Denniston found that many women first fitted with the soft rubber cervical cap were disappointed with it.[16] Of 110 women fitted with the cap between November, 1978 and January, 1980, 26 (23.6%) had discontinued use of the cap after the first month. At the end of the sixth month, only about 50% of the women were still using the cap. In the first six months of the Denniston study, there were seven accidental pregnancies and three of these were determined to be user failure.

AREAS OF CURRENT RESEARCH

Due to the current Class II (experimental) classification of the cervical cap by the FDA, further research is needed in order to allow cervical cap usage to become widespread. Under the current FDA classification, providers of the cap are required to inform women that the device is experimental and to obtain an informed consent by all women using the cap. The FDA also ruled on July 16, 1980, that all providers of the cap were required to obtain an investigational device exemption before Jan. 19, 1981 or risk having their supplies of the cap seized.[17] In order to obtain an investigational device exemption, providers must be overseen by a medical review board, design a study to evaluate the effectiveness of the cap or participate in such a study by other investigators.

Despite these regulations, investigators are developing new ways to make the cervical cap a reasonable means of birth control. A new type of cap that is custom fitted to the cervix has been developed by gynecologist Uwe Freese and dentist Robert Goepp at the University of Chicago.[18] The production of the cap is a three-step process. First, a mold of the cervix is obtained using alginate. After the impression is obtained, a plaster cast is made in the laboratory. Finally, a vacuum casting machine is used to produce the cap of a thermoplastic material. The entire process takes about 30 minutes. The cap incorporates a one-way valve, allowing for menses to flow from the cervix. It is interesting to note that the cap never actually comes in contact with the cervix but is held on by suction and surface tension, resting on cervical mucus instead of the cervical epithelium. This mechanism of adhesion is identical to the way that contact lenses are held on the cornea of the eye.

Freese and Goepp have launched a developmental study with more than 100 women. Thus far (two women have worn the cap continuously for over 28 months), no problems have developed and it is interesting to note that the problem with malodorous secretions appears to have been eliminated by the one-way valve.[19] Another cervical cap involving the custom-fit design is being developed by Robert A. Erb, Ph.D., of the Franklin Research Institute Laboratories in Philadelphia, Penn.[20] Erb's design is not as far developed as Goepp's.

SUMMARY

The national interest in health and the environment has caused many women to reassess their contraceptive method. Many are concerned about side effects of the pill and IUD and are returning to the barrier methods. The medical community should respond by exploring all available avenues of barrier contraceptive technology. The cervical cap should be studied in both the firm and soft rubber variety. Newer designs similar to Goepp's custom fit cap with a one way valve

(Continued on page 224)

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Rheumatic Fever and Rheumatic Heart Disease in Missouri

To WHAT EXTENT do rheumatic fever and rheumatic heart disease remain a problem in Missouri? In view of the apparent continuing decline in the occurrence of acute rheumatic fever, The Committee on Heart Disease in Children of the American Heart Association, Missouri Affiliate, Inc. recommended that a study be done to determine the changes that may have occurred since the study of the prevalence of rheumatic fever and rheumatic heart disease in Missouri in 1962.[1]

Following that study, the Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons, Missouri Heart Association, Missouri Pharmaceutical Association and Missouri Division of Health embarked on an extensive program of primary and secondary prevention of rheumatic fever and rheumatic heart disease.

The first step was to establish a primary prevention program and make available the fluorescent antibody technique in identification of the beta-hemolytic streptococcus. The Missouri Division of Health Laboratory purchased the equipment and sent its personnel to be trained in the technique. The state laboratory and its district laboratories made this procedure available to physicians in the state to assist them in the identification of their patients with beta-hemolytic streptococcus infections.

It was stated that those patients should receive the proper antibiotic for the proper time in order to prevent the possibility of rheumatic fever. In order to make the procedure readily available to physicians in the shortest period of time, the Division of Health embarked on a program to train laboratory personnel in the technique so they could incorporate this procedure into their laboratories. The Missouri Hospital Association was very helpful in promoting and assisting in this phase of this program. The second phase of the primary prevention program involved all other organizations mentioned above in educational programs for physicians throughout Missouri.

The next step was to establish within the Missouri Division of Health a low-cost prophylactic program for the secondary prevention of rheumatic fever and rheumatic heart disease. In addition, a registry of individuals with rheumatic fever and/or rheumatic heart disease was established. It was in this aspect of the program that the Missouri Pharmaceutical Association was most cooperative and effective in getting pharmacies throughout the state to participate in assisting by making available the low-cost prophylactic drugs.

The Missouri Heart Association, through its committee structure, has continued to monitor the rheumatic fever programs. Thus, it was most appropriate to recommend that another study on prevalence of rheumatic fever and rheumatic heart disease be conducted using the same format as that for the study in 1962.[1]

The Missouri Division of Health was willing and interested to assist in cooperation with the Department of Family and Community Medicine of the University of Missouri-Columbia in a study of the prevalence of rheumatic fever and rheumatic heart disease in Missouri. It was planned to duplicate the methodology used in the study done in 1962.[1] The Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons and Missouri Hospital Association were informed of the proposed study and their cooperation was enlisted. All three organizations endorsed the study and offered assistance. The study consisted of two phases.

In 1962, a study of prevalence of rheumatic fever and rheumatic heart disease in Missouri was made for the year 1961. In 1979, a similar study was made for the year 1978. Although there is a marked decline in prevalence of rheumatic fever and rheumatic heart disease, the problems do continue to exist and deserve our attention and alertness in preventing these diseases whenever possible.

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The first phase involved sending a letter to each of the 183 hospitals in Missouri requesting the number of rheumatic fever and rheumatic heart disease patients who had been hospitalized from Jan. 1, 1978 through Dec. 31, 1978. Although the first phase of the study actually began early in 1979, it was decided to use the year 1978 in order to give hospital medical record libraries time to have completed their records for that period. Since the study was designed to be a prevalence study of rheumatic fever and rheumatic heart disease, it was necessary to request additional information regarding each case and the confidentiality of this information was stressed.

In the second phase of the study, a personal letter was sent to every physician in Missouri requesting the number of rheumatic fever and rheumatic heart disease patients who had been seen during the same time period but who had not been hospitalized. This letter was sent to 7,950 physicians which was an increase of 2,257 over the number in the study in 1962.[1]

As in the previous study, a second request was sent to those hospitals that did not respond to the first request. Unfortunately, a limitation in funding prevented a second request to those physicians who did not reply to the first inquiry.

Results

The information requested from the 183 hospitals was received from 147 hospitals. This represents 80% participation.

There were 3,052 replies from the individual requests to the 7,950 physicians in Missouri. Two hundred and twenty-four responses indicated that they were no longer in active practice, had moved from the state or that the physician was deceased. Therefore, the 242 was subtracted from both the numerator and denominator giving a total of 2,814 responses of a possible 7,708. This represents a response of 36.1%.

There was a total of 1,188 diagnosed cases of rheumatic fever and/or rheumatic heart disease reported in the study. A total period prevalence rate of 25 cases per 100,000 population was obtained for these diseases. These cases included both acute and recurrent cases of rheumatic fever as well as active and inactive cases of rheumatic heart disease. In addition to the 1,188 diagnosed cases, there were three probable cases of rheumatic fever. All three patients were hospitalized. These three cases were not included in computing total prevalence rates.

The distribution by age and sex of hospitalized and nonhospitalized patients with rheumatic fever reported is shown in Table 1. Since the study period was for the year 1978, the population census figures is an estimated census supplied by the Missouri Center for Health Statistics. The 1978 estimated population was 4,844,000 with a total of 244 reported cases (acute and recurrent). The prevalence rate of rheumatic fever for 1978 was 4.98 cases per 100,000 persons. The highest prevalence rates (Table 2) were found in the 5-9 and 10-14 age groups that represent 40% of all the cases of rheumatic fever reported. The number of patients diagnosed on an outpatient basis was only slightly more than those who were hospitalized. They are shown in Table 2. The prevalence rate for male patients was 4.72 cases per 100,000 and 5.18 cases per 100,000 for female patients.

The distribution of cases of rheumatic heart

TABLE 1

DISTRIBUTION OF HOSPITALIZED AND NON-HOSPITALIZED PATIENTS WITH RHEUMATIC FEVER REPORTED IN MISSOURI BY AGE AND SEX — 1978

	*Number of Cases**			*Male*			*Female*			*Not Indicated*		
Age Group	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*
0-4	2	1	3	2	1	3	0	0	0			
5-9	19	27	46	7	11	18	12	16	28			
10-14	24	27	51	13	19	32	11	8	19			
15-19	15	21	36	8	8	16	7	13	20			
20-29	15	28	43	3	7	10	12	21	33			
30-39	10	14	24	2	8	10	8	6	14			
40-49	7	5	12	4	2	6	3	3	6			
50-59	8	3	11	3	1	4	5	2	7			
60 and over	13	0	13	10	0	10	3	0	3			
Unknown	1	0	1	1	0	1	0	0	0		1	1
Total	114	126	240	53	57	110	61	69	130	0	1	1

*H — Hospitalized.
NH — Nonhospitalized.
T — Total.

XX Plus 3 "Probable" Cases
All 3 Hospitalized

TABLE 2

PERIOD PREVALENCE RATES AMONG REPORTED HOSPITALIZED AND NON-HOSPITALIZED PATIENTS WITH RHEUMATIC FEVER, RHEUMATIC HEART DISEASE AND CONCURRENT RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE BY AGE AND SEX — MISSOURI, 1961

	Period Prevalence Rates Per 100,000 Population								
	Rheumatic Fever			*Rheumatic Heart*			*Concurrent Rheumatic Fever and Heart Disease*		
Age Group	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
0-4	1.77	0	0.91	0.59	0.59	0.59	0.59	0	0.30
5-9	9.89	16.05	12.90	2.74	0.57	1.68	2.20	1.15	1.68
10-14	15.68	9.71	12.76	3.92	1.53	3.00	2.94	4.10	3.50
15-19	6.87	8.89	7.86	3.43	5.33	4.37	0.86	2.22	1.53
20-29	2.34	7.71	5.03	4.22	10.28	7.25	0.23	1.64	0.94
30-39	3.39	4.41	3.92	9.84	18.91	14.54	0.68	0.95	0.82
40-49	2.52	2.35	2.43	14.30	30.52	22.70	0	0.78	0.41
50-59	1.72	2.69	2.23	30.56	49.92	39.41	3.87	3.07	3.45
60 and over	2.87	0.60	1.53	38.48	46.68	43.31	1.44	2.40	2.01
Total	4.72	5.18	4.95	13.27	22.02	17.89	1.50	1.71	1.61

TABLE 3

DISTRIBUTION OF HOSPITALIZED AND NON-HOSPITALIZED PATIENTS OF RHEUMATIC HEART DISEASE REPORTED IN MISSOURI BY AGE AND SEX — 1978

	*Number of Cases**			*Male*			*Female*			*Not Indicated*		
Age Group	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*
0-4	2	0	2	1	0	1	1	0	1			
5-9	1	5	6	1	4	5	0	1	1			
10-14	4	7	11	2	6	8	2	1	3		1	1
15-19	7	13	20	1	7	8	6	6	12			
20-29	38	24	62	14	4	18	24	20	44			
30-39	42	47	89	16	13	29	26	34	60			
40-49	75	37	112	25	9	34	50	28	78			
50-59	138	55	193	52	19	71	86	36	122		1	1
60 and over	302	65	367	110	24	134	192	41	233			
Unknown	0	1	1	0	1	1	0	0	0	0	2	
Total	609	254	863	222	87	309	387	167	554	0	4	2

*H — Hospitalized.
NH — Not Hospitalized.
T — Total.

disease by age and sex is shown in Table 3. The overall period prevalence rate for this disease in 1978 was 17.9 cases per 100,000 population. This rate was based on the 1978 estimated population and a total of 869 cases reported in the study. Considerably more cases of rheumatic heart disease were seen in patients who were hospitalized than among those seen as outpatients. For rheumatic heart disease, the highest number of cases were found in the elder age groups, especially those 50 years or older (Table 2). Again, based on the estimated population of Missouri in 1978, the period prevalence rate for female patients was 22.0 as compared to 13.3 for male patients.

The distribution of concurrent cases of rheumatic fever and rheumatic heart disease according to age and sex is shown in Table 4. A total of 78 concurrent cases was reported in 1978. Period prevalence rates by age and sex are shown in Table 2. The highest prevalence of cases was in the 5-9 and 10-14 age groups for males and the age groups 10-14 and 15-19 for females.

DISCUSSION

The total period prevalence rate for 1978 was 25 cases per 100,000, a considerable decline from the 87 cases per 100,000 in 1961. If we can assume that physicians who did not report had an experience similar to those who did report, there would be an additional 734 cases of rheumatic fever, rheumatic heart disease or concurrent rheumatic

TABLE 4
DISTRIBUTION OF HOSPITALIZED AND NON-HOSPITALIZED CASES OF CONCURRENT RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE REPORTED IN MISSOURI BY AGE AND SEX — 1978

	*Number of Cases**			*Male*			*Female*			*Not Indicated*		
Age Group	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*	*H*	*NH*	*T*
0-4	0	1	1	0	1	1	0	0	0			
5-9	0	6	6	0	4	4	0	2	2			
10-14	1	13	14	1	5	6	0	8	8			
15-19	0	7	7	0	2	2	0	5	5			
20-29	5	3	8	1	0	1	4	3	7			
30-39	0	5	5	0	2	2	0	3	3			
40-49	1	1	2	0	0	0	1	1	2			
50-59	12	5	17	6	3	9	6	2	8			
60 and over	15	2	17	3	2	5	12	0	12			
Unknown	1	0	1	0	0	0	1	0	1			
Total	35	43	78	11	19	30	24	24	48	0	0	0

*H — Hospitalized Cases.
NH — Nonhospitalized Cases.
T — Total.

fever and heart disease. Likewise, in regard to those patients who were hospitalized, the 80% of the hospitals reporting represented 84.8% of the total hospital beds in the state. If the remaining 20% that represented 15.2% of the beds had a similar experience as those who did report, there would be an additional 146 patients with rheumatic fever, rheumatic heart disease or concurrent rheumatic fever and heart disease who were hospitalized during 1978. Even with this total of 2,066 cases, the period prevalence rate is 41 per 100,000 or less than half the period prevalence rate of 87 per 100,000 in 1961.

In the study, there were 241 cases of rheumatic fever reported for a period prevalence rate of five cases per 100,000 considerably less than the 28.8 cases per 100,000 in 1961. The highest rates for rheumatic fever were in the 5-9 and 10-14 age groups and represent 40% of all the cases of rheumatic fever reported in 1961. These same two age groups constituted 58% of all cases of rheumatic fever reported.

The number of cases of rheumatic fever diagnosed on an outpatient basis was only slightly more than hospitalized cases, 126 to 114 (Table 1). In 1961, the number diagnosed on an outpatient basis was 693 and those hospitalized were 552.

There was little difference between male and female patients in overall prevalence rates of rheumatic fever. The total per 1,000 population for males was 4.72 and for females 5.8.

For rheumatic heart disease, there were 867 cases reported in 1978 for a point period prevalence of 17.9 cases per 100,000. Again, this is considerably less than the 49.6 cases per 100,000 in 1961.

For concurrent rheumatic fever and rheumatic heart disease, there were 78 cases that represent a period prevalence of 1.6 cases per 100,000 in 1978 as compared with 8.7 cases per 100,000 in 1961.

In comparing the period prevalence of rheumatic fever, rheumatic heart disease and concurrent rheumatic fever and rheumatic heart disease in 1978 and 1961, there has been a marked decline. However, it should be recognized that these totals do not represent all of the cases and even for those physicians and hospitals reporting, would not include those cases which might have occurred in patients who did not see a physician. Therefore, the total rates are conservative. Thus, rheumatic fever and rheumatic heart disease continue to exist in a greater magnitude than would be hoped for.

Many physicians have reported that they rarely, if ever, see a case of rheumatic fever. There appears to be a general impression among the physicians that rheumatic fever does not constitute a major problem. However, Stollerman, Siegel and Johnson pointed out that "It is extremely difficult to determine accurately the incidence of acute rheumatic fever in large civilian populations."[2] There have been few studies in recent years. One of the studies was a survey of all of the hospitals in the state by Silberg *et al*.[3] They reported a crude overall incidence rate for rheumatic fever of 4.2 per 100,000 population and an incidence rate of 3.9 per 100,000 for rheumatic heart disease.

Morton *et al*,[4] in a prevalence study of rheumatic heart disease in school children in Colorado, revealed a prevalence rate of 1.7 cases per

1,000 enrolled. In addition, Morton *et al*[5] reported a prevalence rate of 3.7 cases per 100,000 in a study of children in the San Luis Valley in California. Rhodes and Jackson[6] participated in a study involving a continuing survey over a four-year period from 1970 to 1974 that indicated an approximate incidence of 19.5 per 100,000 in 1970 decreasing to 5.9 per 100,000 in 1973.

Indeed, everyone who is interested in rheumatic fever and rheumatic heart disease and is attempting to evaluate the extent of the problem decries the fact that there are no accurate national statistics. Markowitz[7] and DiSciascio[8] pointed out that although the picture of rheumatic fever and rheumatic heart disease is apparently changing, it has not died out. Both agree that the incidence is decreasing and that the severity of the disease is considerably milder than previously.

Quinn and Federspiel[9] conducted a study of incidence of rheumatic fever in Nashville, Tenn. during the period of 1963 and 1969. They found a high crude incidence rate of 14.9 per 100,000 population in 1964 and a low rate of 6.4 per 100,000 population in 1968. However, the number of cases per 100,000 were as follows: In 1963, 12.8; in 1964, 14.9; in 1965, 10.0; in 1966, 10.2; in 1967, 11.3; in 1968, 6.4 and 1969, 8.2. However, they regarded these rates as minimal rather than true and felt that although the rates seemed to be decreasing, a seven-year period was not adequate to interpret the decrease as a significant trend.

Much remains to be learned about rheumatic fever, however. As DiSciascio[8] so beautifully stated, "For all simplicity and lack of glamour, prevention of occurrences is the finest achievement of medicine in rheumatic fever. Moreover, the success of secondary prophylaxis is way out of proportion to the purely numerical reduction of rheumatic fever attacks, because a disproportionate number of deaths and disability are due to recurrences rather than first attacks."

None the less, rheumatic fever and rheumatic heart disease remain a larger problem than we would like.

SUMMARY

A study of the prevalence of rheumatic fever and rheumatic heart disease in 1978 was conducted at the request of the Committee on Heart Disease in Children of the American Heart Association, Missouri Affiliate. Cooperating in the study were the Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons, Missouri Hospital Association and American Heart Association-Missouri Affiliate. Special recognition is due to the Missouri Division of Health for not only assisting in the mechanics for carrying out the study, but also providing financial assistance, thus, making the study possible.

The study in 1978 was designed to be carried out inasmuch as possible exactly as the study done in 1961[1] in order that the period prevalence rate could be compared. The first phase was the reporting by Missouri hospitals of patients with rheumatic fever and rheumatic heart disease who were hospitalized during 1978. The second phase was the reporting of rheumatic fever and rheumatic heart disease patients who were seen by physicians during the same time, but, who were not hospitalized. There was 80% participation by the hospitals and 36.1% participating by the physicians. There was a total of 241 cases of rheumatic fever reported that represents a period prevalence rate of rheumatic fever in 1978 of five cases per 100,000 persons. There was a total of 869 cases of rheumatic heart disease reported for an overall reported prevalence in 1978 of 17.9 cases per 100,000 persons. A total of 78 cases of concurrent rheumatic fever and rheumatic heart disease was reported for the year 1978. This period prevalence rate is 1.6 cases per 100,000 population.

Considering rheumatic fever and rheumatic heart disease together, there was a total of 1,188 diagnosed cases. This gives a total period prevalence rate of 25 cases per 100,000 population. This is considerably less than the total period prevalence rate of 87 cases per 100,000 population in 1961.[1] It should be recognized that the prevalence rate of 25 cases per 100,000 population is probably less than the total rate. It appears that rheumatic fever and rheumatic heart disease remain of sufficient magnitude to deserve our constant attention and alertness to prevent the disease wherever possible and certainly to prevent recurrences.

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Reprints: William C. Allen, M.D.
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Columbia, MO 65212

Cervical Cap

(Continued from page 218)

for menses flow should be developed. Only further research can prove the cervical cap as an effective contraceptive method.

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Reprints: Harry S. Jonas, Dean
University of Missouri-Kansas City
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DR. JAMES DOBSON (*Families* Magazine, October, 1981)

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- Vasodilation occasionally causes facial flushing which can be minimized by recommending that Ru-Vert® be taken following meals or with food.

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Please see next page for a summary of prescribing information

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DESCRIPTION: Each tablet contains the following active ingredients:

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Nicotinic acid	50.0 mg

INOICATIONS: Ru-Vert is indicated as an adjunct therapy in the symptomatic treatment of acute or chronic vertigo.

CONTRAINDICATIONS: Convulsive disorders or known history of sensitivity to any of the listed active ingredients. Because of the vasodilating action of nicotinic acid, Ru-Vert should not be used in patients with hypotension.

WARNINGS: The safety of this preparation during pregnancy and lactation has not been established. Use of this drug requires that the physician evaluate the potential benefits of the drug against any possible hazard to the mother and child.

PRECAUTIONS: Although there are no absolute contraindications to pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold or a focal brain lesion. Caution should be exercised when treating patients with high doses of Ru-Vert who have heart disease. While pentylenetetrazol does not act directly on the myocardium, the results from central vagal stimulation could cause bradycardia.

Pheniramine maleate, like other antihistamines, may produce sedative side effects in certain patients.

Transient vasodilatation due to rapid absorption of nicotinic acid may produce facial flushing and a sensation of warmth. These effects may be ameliorated by recommending that Ru-Vert be taken following meals or with food.

ADVERSE REACTIONS: Pentylenetetrazol in high doses may produce toxic symptoms typical of central nervous system stimulants, which act on the higher motor centers and the spinal cord. Convulsions resulting from this drug are spontaneous and are not induced by external stimuli. They usually last for several minutes and are followed by profound depression and respiratory paralysis. Death has been reported from the ingestion of 10 grams of pentylenetetrazol.

DRUG ABUSE: Drug dependence has not been reported with Ru-Vert.

OVERDOSAGE: Signs and symptoms of acute overdose may be due primarily from overstimulation of the central nervous system and from excessive vasodilatation with resulting autonomic nervous system imbalance. The symptoms may include the following: vomiting, agitation, tremors, hyperreflexia, sweating, confusion, hallucinations, headache, hyperpyrexia, tachycardia. Treatment consists of appropriate supportive measures. If signs and symptoms are not too severe and the patient is conscious, gastric evacuation may be accomplished by induction of emesis or gastric lavage.

Intensive care must be provided to maintain adequate circulation and respiratory exchange.

DOSAGE AND ADMINISTRATION: The recommended dosage of Ru-Vert for vertigo or motion sickness is 1 or 2 tablets three times a day with meals or light snacks.

This drug is not for use in children under 12 years of age.

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J-9043-4 July 1981

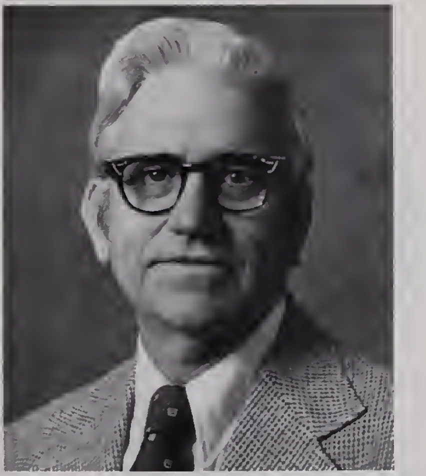
President's Message

When the problems of medicine are discussed by almost anyone, cost seems to be predominant.

Patients demand the best in hospitals and hospital equipment and we as physicians demand that the hospitals in which we practice provide the best equipment and services available. Certainly, this results in more successful treatment and better care than ever before known in the world. So, what can we do about controlling cost?

I think that any physician who has been in practice for more than 20 years knows that we have made great relative strides in cost control. First of all, more and more conditions can be treated on an outpatient basis. More tests can be done and are more practical when the insurance carrier allows for outpatient workup instead of the more expensive inpatient hospital care. Also, reducing stays for patients with conditions necessitating hospitalization and common sense in laboratory testing are important.

Thirty years ago, the standard stay in a hospital for a patient with an uncomplicated appendectomy was one week. Now, most patients are at home by the second or third postoperative day. Patients in for hernia repairs characteristically were hospitalized for seven to ten days, and now most stay for only two to three days. Cholecystectomy patients are being released routinely on the fourth or fifth day.


Eugene T. Hansbrough, M.D.

What progress will be made in the future? I think further education and more excellent hospital care will shorten patient stays. Let's lead this economy. Be sure our patients are all right, but don't over-hospitalize. If every patient hospitalized in America could be released only one day sooner than they now are, the impact on the lower cost of medical care would be astronomical.

MSMA Auxiliary

> *"Yesterday is but a dream, and tomorrow is only a vision; but today well lived makes every yesterday a dream of happiness and every tomorrow a vision of hope."*
>
> —Sir William Osler

Mrs. Sam Gaston
President

I have chosen these words of Dr. Osler as the theme for my year as president of the Missouri State Medical Association Auxiliary. They reflect my philosophy of life and motivate me to seek enriching experiences. To amplify this philosophy, I have formulated what I call the "Beatitudes of Time:"

Take time to work — it is the price of success.
Take time to play — it is the secret of perpetual youth.
Take time to laugh — it is the music of the soul.
Take time to think — it is the source of power.
Take time to dream — it is the highway to creativity.
Take time to plan — it is the blueprint for action.
Take time to read — it is the foundation of wisdom.
Take time to listen — it is the beginning of understanding.
Take time to be friendly — it is the road to happiness.
Take time to love — it is the essence of life.
Take time to worship — it is the renewal of the spirit.
Take time to serve others — it is your gift to life.

My involvement with the medical auxiliary has brought many enriching experiences to me. When Sam and I came to Joplin in 1968 with our three children, we found a warm welcome from our professional peers. These friendships have been enhanced by my working with our Jasper County Medical Society Auxiliary in community health projects. When I accepted a position on the MSMAA Board, I found a similar attitude of cooperation and concern for the betterment of community life and health. This organization provides a means by which I can express my interests in society and utilize my abilities for its improvement. I am honored to serve as president of the Missouri State Medical Association Auxiliary.

The AMA Auxiliary will continue to focus on physical and mental health in 1982-1983 through the Shape Up For Life campaign. It will seek to combine the two focuses into a total quality living pattern. Quality living begins with quality environments. I am deeply concerned about our children and youth as they face the stress and trauma of today's society and deal with fragmented family life.

During the coming auxiliary year, I wish to give particular attention to the stressful world of children and youth. It is my hope that we can implement projects to help curb the escalation of teenage pregnancies, substance abuse and the alarming increase in suicide among our youth. Child abuse and rape continue to demand our attention as we address the stresses in family life. Together, we have the tools and skills to make a difference in our communities. The children of today are our hope for tomorrow, and we must help make their dreams of happiness a reality.

MSMA Members Receive Physician's Recognition Award

Thirty-nine MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of February, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

Mohammed E. Ali, Independence
Arthur I. Auer, St. Louis
Paul L. Barone, Nevada
Vehbi N. Baskurt, Poplar Bluff
H. Bradley Binnington, St. Louis
Robert V. Brennan, Kirkwood
Dale F. Burton, Hannibal
Kenneth D. Corwin, St. Louis
George S. Devins, Kansas City
Theodore F. Edwards, North Kansas City
Richard H. Fallon, St. Louis
Daikichi Hata, Boonville
Falls B. Hershey, St. Louis
Warren J. Hunzicker, Kansas City
Sumer C. Jain, St. Louis
Bruce A. Kauk, North Kansas City
Theodore Krupin, St. Louis
Duk S. Lee, Town and Country
Thomas A. Lovinggood, Cape Girardeau
Francis M. Maple, Springfield
Frederick J. McCoy, Kansas City
Lee A. McNeel, Greenfield
James R. Meador, St. Louis
George C. Olive, Neosho
David W. Ortbals, St. Louis
Francis X. Paletta, St. Louis
Theodore L. Paletta, St. Louis
Gorge K. Parkins, Kansas City
Horace W. Scott, St. Louis
Vidya Sharma, Kansas City
Robert P. Stoy, Columbia
Barnard C. Trowbridge, Kansas City
Sharon E. Waggoner, St. Joseph
Harry E. Webb, Kansas City
William B. Webber, St. Louis
William E. White, Kansas City
Morris F. Wise, Kansas City
Charles E. Workman, Kansas City
George M. Zografakis, St. Louis

Continuing Education Coming Events

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673 or (314) 454-3873
Contact: **Loretta Giacoletto, Office of CME**

Apr. 22	Multiple Systems Trauma: 1982
May 13-14	Ninth Annual Symposium on Obstetrics and Gynecology
May 24-28	Diagnostic Interview Schedule Training; 1982
June 10	Prevention of Hepatitus B Virus Infection With Vaccine and Immunoglobulin
Sept. 11	Flap Symposium: Management of Large and Complicated Wounds

St. Louis University Medical Center
Continuing Education
3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
Contact: **John A. Grellner, Director**

Apr. 22-23	Symposium on Cardiac Rehabilitation: State of the Art-1982

Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
Contact: **Richard B. Oglesby, M.D.**

May 16	14th Eye Seminar: Extracapsular Cataract Extraction
Sept. 12	15th Eye Seminar — Surface Correction of Aphakia

Freeman Hospital
1102 W. 32nd, Joplin 64801
(417) 623-2801, Ext. 310
Contact: **Joy W. Barnett, CME Coordinator**

Apr. 24	Spring Seminar: Clinical Pulmonary Medicine — Evaluation and Management

Missouri Chapter, American College of Surgeons, Inc.
P.O. Box 4562, Springfield 65808
Contact: **Linda Wheelen, S. Executive Secretary**

June 11-12	1982 Annual Meeting (Alameda Plaza, Kansas City)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

Contact: **David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

University of Missouri-Kansas City School of Medicine — **Kansas City Southwest Clinical Society**
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: **Alta Bingham**

May 6-7	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
June 5	Symposium on Physical Fitness (Crown Center Hotel)
Sept. 24-26	Ozark Chest Conference (Osage House, Lake Ozark. Contact Susan K. Pingleton, M.D. (816) 474-4100)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
Contact: **Ronald G. Evens, M.D., Director**

May 10	City-Wide Radiology Conference — Neuroradiology

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

May 7-9	Fifth Annual Missouri Cardiovascular Conference (Tan-Tar-A, Lake Ozark)
May 25-26	Fifth Annual Primary Pediatrics for the Primary Physician
June 24-26	Annual Clinical Conference on Arthritis
Aug. 7-8	Fifth Annual Soft Tissue Surgery Workshop
Sept. 24-26	Fall meeting — Missouri Ear, Nose and Throat Society (Lodge of the Four Seasons)
Oct. 7-8	Fourth Annual Missouri Perinatal Association Meeting
Oct. 14-16	Fourth Annual Autumn Rheumatology Symposium

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August 13-15 Orlando, FL
September 24-25 Washington, DC
October 22-23 Cincinnati, OH
October 29-31 Las Vegas, NV

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August 20-22 Montreal, Canada
September 24-25 Seattle, WA
October 22-23 Boston, MA

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August 13-15 Nashville, TN
August 13-15 Hilton Head, SC
September 24-26 Las Vegas, NV
October 15-16 Atlanta, GA
October 22-23 Chicago, IL

Cardiac Rehabilitation**

May 14-15 St. Louis, MO
September 24-25 Philadelphia, PA
October 15-16 Detroit, MI
October 29-30 Chicago, IL

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July 16-18 Orlando, FL
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medical melange

Notes of interest from Here . . . . and There

After 36 years of practicing medicine as a family physician in Warrenton, **Dr. Harold F. Hoelscher** announced his retirement on March 31. Dr. Hoelscher was born and grew up in the southern part of Warren County. In 1935, he attended the University of Missouri and graduated with a BA degree and a bachelor of science in medicine degree in 1941. He attended the University of Tennessee in Memphis and received his M.D. degree in 1953. While serving in the U. S. Army, he was stationed overseas for approximately two years and in the United States for six months. He served in the 57th Field Hospital. Dr. Hoelscher is a member of the AMA and the Southern Medical Association. He is a charter member of the American Academy of General Practice and a member of the Warrenton Rotary Club.

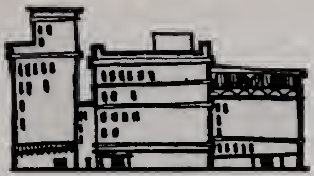
Three members of Greene County Medical Society participated in the 31st Missouri Annual Meeting of the American Association of Medical Assistants-Missouri Society in Springfield on April 16-18. **Dr. Walter A. German** extended a welcome to the group. **Dr. Charles J. Ash** spoke on "Facts and Myths of Physical Fitness" and discussed fads and myths regarding nutrition and physical fitness. **Dr. Richard McLaughlin** served as master of ceremonies at the President's Banquet and Installation of New Officers. A highlight of the banquet was the performance by **"The Singing Doctors"** of Springfield.

Dr. Nancy H. Ceaser, director of the neonatal intensive care nursery at Lester E. Cox Medical Center in Springfield, presented a program for area nurses and physicians at West Plains Memorial Hospital in March. She discussed cardiopulmonary resuscitation and various emergency techniques used prior to transporting a critically ill infant to a newborn intensive care unit.

Dr. Jack Sanders of Jefferson City, a cardiologist, recently addressed the Jefferson City West Rotary Club. He spoke on the American Heart Association.

Dr. Carl M. Myers, Platte City, has been elected president of the Kansas City Academy of Family Physicians for 1982. In practice since 1977, Dr. Myers graduated from the University of Missouri-Columbia School of Medicine. He served his residency at the Goppert Family Care Center-Baptist Memorial Hospital in Kansas City. — **Dr. Jerome M. Aronberg,** Washington (Mo.), has been elected to serve as president of the St. Louis Dermatology Society for the next two years. A member of St. Louis Metropolitan Medical Society, Dr. Aronberg has practiced in Washington on Saturdays for the past two years.

Dr. Jeanette Akhter, Columbia, spent three weeks of voluntary service last August on the American Indian reservation in Shiprock, N. M. She was one of 48 obstetricians and gynecologists who received special citations for service from the U. S. Public Health Service's Indian Health Service and the American College of Obstetricians and Gynecologists.



NEWS
From the Medical Schools

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. Joseph W. Lamberti, associate professor of psychiatry, was honored recently as the first recipient of the Guhleman Award for Clinical Excellence.

The award was established by the Department of Psychiatry to honor *Dr. Henry V. Guhleman* of Jefferson City, clinical professor of psychiatry, for his distinguished service to the department and the School of Medicine for the past 30 years. The award will be presented each year to a member of the psychiatry faculty who has provided outstanding service as a clinician-teacher in keeping with the model set by Dr. Guhleman.

The award, presented by Dr. Guhleman, consists of a plaque and monetary award provided by the department's Medical Practice Group. The ceremony took place during the department's Annual Chairman's Colloquium.

Dr. John F. Simonds, professor of child psychiatry, presented a paper at the Fifth Belinson Symposium on Dimensions of Illness Behavior in Diabetic Adolescents held recently in Tel Aviv, Israel. His topic was "The Psychosocial Aspects of Diabetes in Adolescents and Children."

Dr. J. Donald Easton, professor and chairman of the Department of Neurology, served as chairman of the Seventh International Conference on Stroke and Cerebral Circulation sponsored by the American Heart Association in New Orleans in February.

Dr. Clark Watts, professor and chief of neurological surgery, recently presented a paper entitled "The Relationship Between Visual Evoked Potentials and Intracranial Pressure" at the annual meeting of the American Academy of Neurological Surgery in Palm Springs, Calif.

The paper was based on work by Dr. Watts and *Dr. Don York*, associate professor in the Department of Physiology. It demonstrates for the first time a noninvasive means of accurately estimating intracranial pressure in both children with hydrocephalus and patients with cerebral edema following head injury.

Dr. James D. Dexter, professor of neurology, served as chairman of the American Association of the Study of Headaches annual meeting on the "Diagnosis and Treatment of Headache in Scottsdale, Ariz. recently. He also presented a paper at the meeting.

Dr. Donald Lindbergh, professor of pathology, recently spoke on "A Future View of Medical Information Systems in the United States" at the Medical Information Systems Development Center in Tokyo.

Dr. Linda Ansbacher, a graduate of the University of Kansas School of Medicine, has joined the faculty as an assistant professor after completion of two years of neuropathology training at the University of Iowa. She had previously finished her anatomic and clinical pathology residency at UMC. Dr. Ansbacher is certified by the American Board of Pathology in Anatomic and Clinical Pathology and Neuropathology.

Dr. Mitchel Rosenholtz, is the recipient of the Faculty Service Award for Contribution to Students, Medical Center and the Community. This award is given to one faculty member of the School of Medicine by the Student Activities Committee each year.

Dr. W. B. Stewart, professor of pathology, spoke on "Quality Control in Clinical Chemistry" recently at the European Federation for Medical Informatics meeting in Dublin, Ireland.

WASHINGTON UNIVERSITY

The Biomedical Computer Laboratory (BCL) at the School of Medicine has received a three-year $1,168,436 grant from the National Institutes of Health, Division of Research Resources. The grant helps support the Laboratory's continued operations as a biomedical data processing resource.

Funded under the Biotechnology Resource Program, the BCL conducts research to develop advanced digital computing systems for biomedical applications and collaborates in research with scientists at the University and the School of Medicine. The BCL also provides education and training in computer technology for biomedical researchers, and works with commercial firms in further developing advanced systems for use in medical centers and laboratories.

The BCL is one of the largest biomedical computing resources in the country. Since its founding in 1964, it has grown from an original staff of nine to a present staff of approximately 70 electronics engineers, computer scientists, mathematicians and biological scientists who collaborate with more than 100 investigators locally and nationally. Many of the innovations developed at the BCL have been put to use in patient care as well as in basic research.

UNIVERSITY OF MISSOURI-KANSAS CITY

Stephen C. Hamburger, M.D., has been appointed chairman of the Department of Medicine at the School of Medicine and Truman Medical Center (TMC). In announcing the appointment, Dean Harry S. Jonas said that Dr. Hamburger has accepted this important responsibility and "he has provided leadership to our institution in a variety of ways since coming here in 1977."

Dr. James J. Mongan, executive director of Truman Medical Center, said that "Dr. Hamburger's experience in this facility and with this unique program should be a major asset as he begins to cope with the problems before him. At a time when many issues are facing the institution, a young person with Steve's drive and energy will help all of us in the coming months."

Dr. Hamburger served as medical director at Truman Medical Center-East for two years. Since 1980, he has been project director for the Western Missouri Area Health Education Center and director of the internal medicine residency training program at TMC. In 1981, Dr. Hamburger became senior docent, served as chairman of the Council of Docents and was academic program director of the UMKC-Affiliated Residency Program.

A native of New Jersey, Dr. Hamburger received his B.A. and M.D. degrees from the University of Connecticut. He completed a residency at the Medical College of Pennsylvania and spent two years there as a fellow in endocrinology-metabolism. He joined the School of Medicine faculty in 1977 as an assistant professor of medicine. In addition to the above responsibilities, he has served as vice-chairman of the Department of Medicine since 1978 and is a member of numerous medical school and hospital committees.

Jane Ann Dice, a third-year medical student, is this year's recipient of the Southern Medical Association scholarship. This is an annual award made by the SMA to one student in each medical school within the southern district.

Four UMKC medical students have been accepted for presentation of their research projects at the University of Illinois School of Medicine in Chicago on April 1-3. They are *Steve Hadzima, Anne Jones, Steve Miller* and *Craig Reiss*.

Steve Miller, a Year V medical student, is the recipient of the William J. and Dorothy Fish Kerr Student Fellow in Clinical Cardiology. He will spend two months at the University of California-San Francisco this fall working in their Cardiology Department.

ST. LOUIS UNIVERSITY

Alberto Galofré, M.D., assistant professor of internal medicine and assistant dean for curriculum, has been awarded a two-year, $51,850 grant from the National Fund for Medical Education. Titled "Integration of Geriatrics into the Medical Curriculum," the grant will blend the study of the elderly into the current undergraduate curriculum of medical students.

"Geriatrics is becoming increasingly important to future physicians as the number of elderly patients grows. Today, those more than 80 are the fastest growing group in the nation and one of the heaviest users of the health care system," says Dr. Galofré.

Dr. Galofré

The grant will incorporate geriatric contact at all levels of students' education and will focus on developing communication skills with the elderly. Simple interviewing skills with healthy older adults to communicating with dying or psychiatric elderly persons will be taught. Students with a strong interest in geriatrics will have the opportunity to participate in an elective course that involves caring for elderly patients in nursing homes, ambulatory care centers and hospitals.

Dr. Galofré will be assisted by *Rodney Coe*, Ph.D.; *Hulda Grobman*, Ed.D.; *Chris Prendergast*, M.A.; *George Zimney*, Ph.D.; and *Bob Oberst*, all of the medical center.

George E. Gantner, Jr., M.D., chairman and professor of the Division of Forensic and Environmental Pathology, has been elected as president-elect of the American Academy of Forensic Sciences. Dr. Gantner is also medical examiner for both the city of St. Louis and St. Louis County.

The American Academy of Forensic Sciences is a national nonprofit professional society devoted to the improvement, administration and achievement of justice through the application of science to processes of law. The association's members include physicians, attorneys, dentists, toxicologists, physical anthropologists, document examiners, engineers, criminalists and others who practice, study and perform research in the diversified fields relating to the forensic sciences.

Dr. Gantner's term as president-elect will extend from July, 1982 to July, 1983. He will then become president of the association and will remain in that position until July, 1984. *Anthony Longhetti,* director of the sheriff's crime laboratory in San Bernadino, Calif., is now president of the association.

In addition to his position as chairman and professor of the Division of Forensic and Environmental Pathology, Dr. Gantner served as acting chairman of the Department of Pathology in 1965-1966 and again in 1977-1979. He was a professor of general pathology until he took his new position in 1975.

Dr. Gantner has published more than 60 articles in his field, written more than 20 abstracts and authored or co-authored six books. He has a wide variety of appointments ranging from serving on the Mayor's Advisory Committee on the Medical Examiner's Office for the city of New York from 1976 to 1978 to being elected repeatedly as secretary-treasurer of the National Association of Medical Examiners. The association's headquarters moved to St. Louis University School of Medicine in 1976.

Dr. Gantner became chief medical examiner for St. Louis County when the medical examiner system was established there on Jan. 1, 1969. He was appointed to the same position for the city of St. Louis when that system was adopted on Jan. 1, 1977.

A native St. Louisan, Dr. Gantner is a graduate of St. Louis University, the University's School of Medicine.

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LETTERS to the EDITOR

To the Editor:

As a new student member of the MSMA, I was pleased to receive one of the benefits of membership — Missouri Medicine. However, my excitement faded to disappointment when one of the first articles I read in the January, 1982 issue was the Editor's Corner: "Women! Hot and Cold?" I found many of the comments, such as "Their (women's) thermostats operate in an unrelated manner which considers: (1) Their personal problems on a given day, . . . (3) Their score in the afternoon's bridge game . . . " quite disturbing, but I shrugged it off as an attempt at humor and looked forward to the next issue.

Unfortunately, February brought "Ten Commandments for a Young Man Beginning Practice." Dr. Wooldridge seems unaware that many women are entering the field of medicine today. My class at St. Louis University is 20% women and many medical schools have a much higher percentage. There is already a significant number of practicing female physicians in Missouri. I think we deserve the respect of our male colleagues, and articles such as these show a lack of sensitivity and awareness. In an otherwise enjoyable and informative journal, it is disheartening to see one feature that perpetuates stereotypes.

Laura J. Petersen
Class of 1984
St. Louis University
School of Medicine

My Dear Ms. Petersen:

To begin, let me agree that the title "Ten Commandments for a Young *Man* Beginning Practice" was an error. For that, I apologize. I have been on a medical school faculty for a long time, probably before you were born, and I am also quite aware there are many women in medical schools. I have helped many of them to gain admittance, others while they were in school and I take pride in those associations.

As to the former editorial, which referred to the difference in toleration of temperature between men and women, I do not retreat. First, it is generally true. Second, it did provide a basis for humorous comment and was received that way by numerous people except yourself. It was written only to amuse.

I assure you I am not really the insensitive person you imply. I am a harmless, fond and benign grandfather who has found that when one is reasonably slow to take offense he or she is not likely to give reasonable grounds for offense — but that is only learned with time, when it is learned at all.

Sincerely yours,
Wilfred E. Wooldridge, M.D.
Editor, Missouri Medicine

To The Editor:

We read with considerable interest the paper by Luetje and Whittaker, "Acoustic Tumors: Surgical Results In 42 Consecutive Operations" (Missouri Medicine, 79:17-20, 1982), in which they detailed their experience with the translabyrinthine approach to acoustic nerve tumors. They conclude by stating that "the translabyrinthine approach is superior to the old suboccipital approach with regard to facial function postoperatively." This conclusion is drawn from comparing their results using the translabyrinthine approach with those of neurosurgeons who use the suboccipital approach.[1] Luetje and Whittaker report a 7.1% incidence of facial paralysis while stating that DiTullio *et al* had a 12.0% paralysis. This comparison is misleading since in comparable sized tumors, DiTullio, who used the suboccipital approach, had somewhat better results than Luetje and Whittaker.

Luetje and Whittaker noted good preservation of facial function in 23 of 26 patients (88%) with tumors 2 cm or less in size, based upon CT measurements. DiTullio *et al* reported 100% preservation of good facial function in six patients with tumors no greater than 2 cm in size as measured at the time of surgery. Luetje and Whittaker report preservation of good facial function in 12 of 16 (75%) patients with tumors between 2 cm and 3.8 cm, whereas DiTullio reported intact facial nerve function in 79% of 28 patients with tumors between 2 cm and 4 cm in size. Parenthetically, Luetje and Whittaker reported cerebrospinal fluid leaks in two patients with the smaller tumors whereas DiTullio *et al* reported none.

With the CT scan, brain stem evoked potentials and other developing sophisticated procedures, more and more acoustic nerve tumors will be diagnosed earlier. Some of the patients will have retained hearing and the surgical procedure chosen for their surgical removal should be designed to preserve if not improve that hearing ability. The translabyrinthine approach results in permanent hearing loss as it destroys the labyrinth, whereas preservation of hearing with the suboccipital approach is increasingly being reported.[2] The results the authors claim for the acoustic nerve tumor less than 4 cm in diameter are no better than that for other experienced surgeons using other approaches with regard to facial nerve function. The developer of their approach, House, notes the danger of injury to the brain stem with the use of the translabyrinthine approach for tumors larger than 4 cm.[3] For these various reasons, which we understand well from personal experience, we believe the translabyrinthine approach has only limited use in the surgical treatment of acoustic neuromas. This use is in a deaf patient who has a small acoustic neuroma with a significant intracanalicular component.

Sincerely,
Clark Watts, M.D.
Q. Michael Ditmore, M.D.
Division of Neurological Surgery
University of Missouri-Columbia
Medical Sciences Center

---

[1] DiTullio, M. V., Malakasian, D. and Rand, R. N.: A Critical Comparison of Neurosurgical and Otolaryngological Approaches to Acoustic Neuromas. J. Neurosurg. 48:1-12, 1978.

[2] Rand, R. W., Dicks, D. O., Morgan, D. E. and Bentson, J. R.: Acoustic Neuromas. In Neurological Surgery. J. R. Youmans (ed.), Ch. 93, Philadelphia, W. B. Saunders Co., 1982, pp. 2967-3003.

[3] House, W. F.: Monograph II: Acoustic Neuroma. Arch. Otolaryng. 88:576-715, 1968.

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Use in Pregnancy—Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

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ADVERSE REACTIONS

Hydroflumethiazide—Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine—Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

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REFERENCES

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. Moser M, Kaplan NM, Sullivan JM, Paul O, in discussion: Perspectives on MRFIT: Can the interim data be applied to your practice . . . ? An Interim Report on the Ongoing Multiple Risk Factor Intervention Trial: MRFIT. *New Perspectives on Hypertension* 2(1):10-19, February 1981.

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New Members

Ali J. Abu-Libdeh, M.D., St. John's Medical Center, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Abu-Libdeh is a native of Jordan, received his preliminary education at Cairo University and his M.D. degree at Cairo University in 1969. He specializes in internal medicine.

Behrooz A. Akbarnia, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Akbarnia is a native of Tehran, received his preliminary education at Tehran University and his M.D. degree at Tehran University in 1966. He specializes in orthopedic surgery, scoliosis and pediatric orthopedics.

Charles C. Azu, M.D., 2601 N. Whittier, St. Louis 63113, has become a member of St. Louis Metropolitan Medical Society. Dr. Azu is a native of Nigeria, received his preliminary education at Washburn University and his M.D. degree at St. Louis University in 1959. He specializes in general and abdominal surgery.

Debabrata Banerji, M.D., 1704 S. Broadway, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Banerji is a native of India, received his preliminary education at Calcutta University and his M.D. degree at Calcutta University in 1962. He specializes in general surgery.

Nathan B. Beraha, M.D., 500 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Beraha is a native of Washington, D.C., received his preliminary education at Northwestern University and his M.D. degree at Northwestern University in 1979. He specializes in pediatrics.

Michael J. Carron, M.D., 2123 Oak Dr., St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Carron is a native of St. Louis, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1976. He specializes in radiology.

Nancy H. Ceaser, M.D., 1423 Jefferson, Springfield 65802, has become a member of Greene County Medical Society. Dr. Ceaser is a native of Chicago, Ill., received her preliminary education at Northwestern University and her M.D. degree at Northwestern University in 1976. She specializes in pediatrics and neonatology.

Mark Dellasega, M.D., Patterson-Smith Clinic, 3302 McIntosh Circle, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Dellasega is a native of Pittsburg, Kan., received his preliminary education at Pittsburg State University and his M.D. degree at Kansas University in 1975. He specializes in gastroenterology and internal medicine.

Daniel D. Foote, M.D., 229 Professional Building, 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr. Foote is a native of Hartford, Conn., received his preliminary education at Duke University and his M.D. degree at Boston University in 1966. He specializes in anesthesiology.

Gordon L. Johnson, M.D., Jefferson Memorial Hospital, Festus 63028, has become a member of Jefferson County Medical Society. Dr. Johnson is a native of El Reno, Okla., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in pathology.

Mark A. Judge, M.D., 2401 Jackson Ave., Joplin 64801, has become a member of Jasper County Medical Society. Dr. Judge is a native of Boone, Ky., received his preliminary education at New Haven College and his M.D. degree at Vanderbilt University in 1962. He specializes in ophthalmology.

Eileen Lamb, M.D., 1301 Boonslick Dr., St. Charles 63301, has become a member of St. Charles-Lincoln County Medical Society. Dr. Lamb is a native of Boston, Mass., received her preliminary education at the University of Denver and her M.D. degree at St. Louis University in 1977. She specializes in internal medicine.

Hemlata K. Lepkowski, M.D., 8 Morena Ct., Ballwin 63011, has become a member of St. Louis Metropolitan Medical Society. Dr. Lepkowski is a native of India, received her preliminary education at St. John's College and her M.D. degree at Lady Hardinge College in 1968. She specializes in radiology.

Julie A. Long, M.D., Barnes Hospital, St. Louis 63110, has become a member of St. Louis

Metropolitan Medical Society. Dr. Long is a native of Minneapolis, Minn., received her preliminary education at the University of Florida and her M.D. degree at the University of Florida in 1979. She specializes in general surgery.

Bryson Roy McHardy, Jr., M.D., 711 Grand Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby Medical Society. Dr. McHardy is a native of Minneapolis, Minn., received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of South Dakota in 1978. He specializes in pediatrics.

Dominic M. Meldi, M.D., 1211 S. Glenstone, Springfield 65804, has become a member of Greene County Medical Society. Dr. Meldi is a native of Litchfield, Ill., received his preliminary education at the University of Illinois and his M.D. degree at Washington University in 1978. He specializes in internal medicine.

John J. Mentel, M.D., 6 Jungermann Circle, Suite 103, St. Peters 63376, has become a member of St. Charles-Lincoln County Medical Society. Dr. Mentel is a native of Colorado Springs, Colo., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1978. He specializes in internal medicine.

R. William Morris, M.D., 1004 Kennerly Rd., Suite 2355, St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Morris is a native of St. Louis, received his preliminary education at Harvard University and his M.D. degree at St. Louis University in 1972. He specializes in internal medicine.

Ellis B. Norsoph, M.D., St. John's Mercy Medical Center, 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Norsoph is a native of Philadelphia, Pa., received his preliminary education at Princeton University and his M.D. degree at Washington University in 1981.

Theodore A. Norwood, Jr., M.D., 3009 N. Ballas Rd., St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Norwood is a native of Jefferson City, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1974. He specializes in general and cardiovascular surgery.

Marcelino Pon, M.D., 2928 High Ridge Blvd., High Ridge 63049, has become a member of St. Louis Metropolitan Medical Society. Dr. Pon is a native of Peru, received his preliminary education at San Marcos University and his M.D. degree at San Marcos University in 1967. He specializes in family practice.

Jimmy W. Pyron, D.O., 1102 W. 32nd, Joplin 64801 has become a member of Jasper County Medical Society. Dr. Pyron is a native of Houston, Tex., received his preliminary education at Oklahoma Christian College and his D.O. degree at Kirksville College of Osteopathic Medicine in 1972. He specializes in family practice.

Anchala N. Reddy, M.D., 1031B McIntosh Dr., Joplin 64801, has become a member of Jasper County Medical Society. Dr. Reddy is a native of India, received his preliminary education at G. A. College and his M.D. degree at Kurnool Medical College in 1970. He specializes in internal medicine and pulmonary diseases.

Kirk Douglas Ridley, M.D., 206 E. North St., Belton 64012, has become a member of Jackson County Medical Society. Dr. Ridley is a native of Kansas City, received his preliminary education at Kansas University and his M.D. degree at the University of Kansas in 1978. He specializes in family practice.

Robert D. Spewak, M.D., 6651 Chippewa, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Spewak is a native of St. Louis, received his preliminary education at Drake University and his M.D. degree at St. Louis University in 1979. He specializes in pediatrics.

Christopher James Stewart, M.D., 4921 Woodfield, St. Joseph 64506, has become a member of Buchanan County Medical Society. Dr. Stewart is a native of Edmonton, Alberta, Canada, received his preliminary education at Queens University and his M.D. degree at the University of Calgary in 1974. He specializes in emergency medicine.

William S. Thompson, M.D., 4930 Lindell Blvd., St. Louis 63108 has become a member of St. Louis Metropolitan Medical Society. Dr. Thompson is a native of Washington, D.C., received his preliminary education at the University of Pittsburgh and his M.D. degree at Meharry College in 1978. He specializes in general practice.

Barry D. Turner, M.D., 2929 Baltimore, Suite 500, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Turner is a native of Hastings, Neb., received his preliminary education at the University of Nebraska and his M.D. degree at the University of Nebraska in 1971. He specializes in orthopedic surgery.

James D. Turner, M.D., 800 E. 5th, Washington 63090, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Turner is a native of St. Louis, received his preliminary education at University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1975. He specializes in family practice.

Gary M. Wasserman, M.D., 1559 Woodroyal West Drive, Chesterfield 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. Wasserman is a native of St. Louis, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1980. He specializes in obstetrics and gynecology.

James W. Wilson, D.O., 2828 N. National Ave., Springfield 65803, has become a member of Greene County Medical Society. Dr. Wilson is a native of Newark, Ohio, received his preliminary education at Wittenberg University and his D.O. degree at Kirksville College of Osteopathic Medicine in 1974. He specializes in family practice.

New Student Members

St. Louis University

Gary M. Albers
William R. Davis
Matthew D. Gibb
Jacqueline Harvey
Mark D. King
George A. Lodoly
Robert J. Zehr

University of Missouri-Columbia

Paul H. Love
Sharon P. Marshall
Alan G. Wynne

University of Missouri-Kansas City

Tracy W. Dobbs
Annette M. Quick

Washington University

Gordon H. Robinson
James B. Ruben
James E. Toliver, Jr.

In Memoriam

Gerald W. Dickerson, D.O., Hillcrest Plaza, Doniphan 63935; graduate of the Kansas City College of Osteopathic Medicine, 1952; member of Butler-Wayne-Ripley-Carter County Medical Society; aged 59; died Nov. 27, 1981.

Bernard L. Murphy, M.D., 2000 Crescent Dr., Hannibal 63401; graduate of St. Louis University, 1930; member of Marion-Ralls-Shelby County Medical Society; aged 77; died Jan. 6, 1982.

Lawrence P. Engel, M.D., 6505 W. 103rd, Shawnee Mission, Kan. 66212; graduate of the University of Kansas, 1919; member of Jackson County Medical Society; aged 87; died Jan. 16, 1982.

Terrence C. Bladow, M.D., Route 5, Joplin 64801; graduate of University of Missouri-Columbia, 1962; member of Jasper County Medical Society; aged 46; died Feb. 12, 1982.

Albert J. Motzel, M.D., 6238 Washington Blvd., St. Louis 63130; graduate of St. Louis University, 1921; member of St. Louis Metropolitan Medical Society; aged 86; died Feb. 14, 1982.

Herbert S. Pyne, M.D., 8901 Westhaven Ct., St. Louis 63126; graduate of Washington University, 1921; member of St. Louis Metropolitan Medical Society; aged 88; died Feb. 27, 1982.

Enoch N. Gentry, M.D., 810 W. 69th, Kansas City 64113; graduate of Washington University, 1928; member of Jackson County Medical Society; aged 79; died Feb. 28, 1982.

David Rothman, M.D., 8033 Davis, St. Louis 63105; graduate of Washington University, 1935; member of St. Louis Metropolitan Medical Society; aged 70; died Feb. 28, 1982.

Masao Ohmoto, M.D., 9794 Sherrell Ct., St. Louis 63119; graduate of St. Louis University, 1943; member of St. Louis Metropolitan Medical Society; aged 65; died March 5, 1982.

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in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE AMA'S TWO "Placement Registers" began bimonthly publication in February. The "Opportunity Placement Register" lists more than 1,100 medical practice opportunities for physicians. The "Physician Placement Register" lists 1,700 physicians looking for new positions. For the past four years the registers, which are the key to the AMA Physicians' Placement Service computerized information bank, have been published quarterly. The February registers are now available. For information, contact Physicians' Placement Service, AMA Headquarters (312) 751-6282.

THE AMA SUPPORTED a "good Samaritan" bill that would encourage the rendering of medical emergency care aboard aircraft by relieving medical personnel and air carrier employees from potential liability. In a letter to the congressional committee considering the bill (HR 5054), the AMA noted that it backed a similar measure in the last session of Congress. The AMA informed the Committee of the recent House of Delegates action recommending that each commercial air carrier conduct an annual first aid and CPR program for flight attendants and have a trained flight attendant on every flight. The House also urged physicians to respond to in-flight medical emergencies if requested by the flight crew and called on the AMA to continue to inform physicians on the incidence of, and how to care for, in-flight medical emergencies.

THE SOCIOECONOMIC MONITORING SYSTEM, a speedier method of gathering and reporting changes in many aspects of physicians' practices, has been launched by the AMA. The system substitutes periodic telephone interviews with randomly selected physicians for annual mail questionnaires, the principal device used to gather socioeconomic information since 1966. The new system will yield information in about ten weeks instead of the 12 months required to gather and analyze mail survey forms. It will provide the AMA with the capability to update socioeconomic data on quarterly basis. Survey results will be widely disseminated. The program is directed by the AMA Center for Health Policy Research in cooperation with the AMA Division of Survey and Data Resources. Mathematica Policy Research, Inc., of Princeton, N.J., will conduct the telephone interviews for the AMA.

THE POTENTIAL HAZARD of very low calorie protein diets warrants a warning label on these "vigorously promoted" products, the AMA told the Food and Drug Administration. In a letter supporting a proposed label warning, the AMA also urged the agency to consider such additional options as "regulation of 'protein products' and very low calorie diet products as 'medical foods' or even as new drugs." While stating that the protein-sparing fast is valuable in treating morbidly obese individuals, the AMA said exploitation of this concept in liquid protein preparations has led to widespread use without medical supervision. Seventeen deaths have been attributed to popular versions of these products, the Association said. The moderately overweight person probably should not use a diet containing less than about 900 kcal, the AMA said.

MORE THAN 50 HOURS of Category 1 CME credit are now available through the 18 programs offered by the AMA Video Clinic Library. "Common Skin Disorders: The Office Approach" is the latest of these in-depth courses designed for individual or small group study in the home, office, or hospital. Some other courses are "Primary Care of Common Sexual Problems," "Chronic Obstructive Pulmonary Disease," and "Antibiotic Therapy in Office Practice." The 18 clinics are two-to-six hour courses containing a complete analysis of physiology, etiology, diagnosis, treatment and prognosis. The programs may be rented or purchased. Each consists of a color video tape, illustrated study guide and self-assessment tests. For information on the programs and charges, contact the Division of Marketing and Meeting Services, AMA Headquarters (312) 751-5951.

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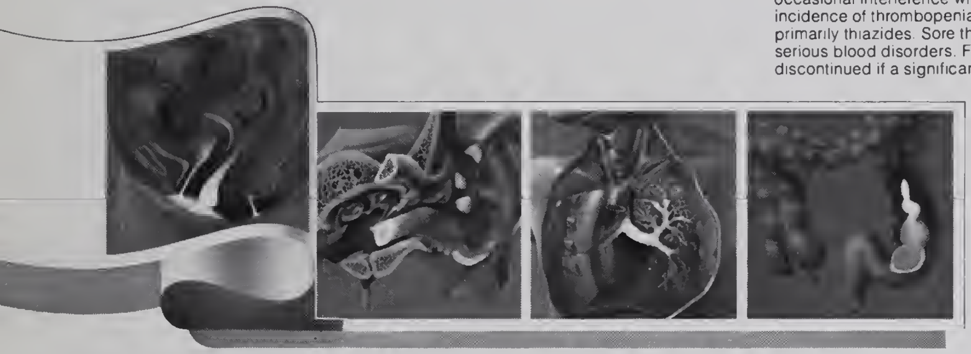

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Before prescribing, please consult complete product information, a summary of which follows:
Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.
For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae*. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.
For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.
For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.
Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.
Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.
Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.
Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions.* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.
Dosage: Not recommended for infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:
Adults. Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.
Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.
For patients with renal impairment. Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:
Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS:
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1. Rubin RH, Swartz MN: *N Engl J Med* 303:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

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* due to susceptible strains of indicated organisms

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Missouri Medicine

Vol. 79, No. 5 (ISSN 0026-6620) May, 1982

Special Feature

The Historical Background of Where American Medicine Is Today and How It Got There

Extracranial-Intracranial Bypass

A Review

Percutaneous Nephrostomy

Case Reports

MDS
COLLEGE OF PHYSICIANS
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Chest Case of the Month

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Case Report

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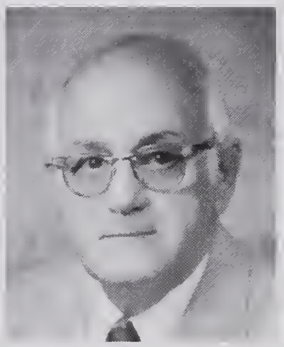

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MSMA
Missouri State Medical Association

NEWS ROUND - UP

May, 1982

Legislature recognizes 'brain death'

During a rather hectic final week, the Missouri General Assembly adopted **HB 1223** (Determination of Death) by an overwhelming majority. The bill recognizes that cessation of all brain activity, including the brain stem, is one method of determining death.

Several other bills of interest to medicine were passed during the Session. Those bills are as follows:

HB 1011 increases funds for physicians services under Medicaid. Exact hikes will be enacted on Oct. 1. MSMA supported.

HB 1086 (Fraud and Abuse) offers physicians in certain areas the opportunity to participate in Medicaid recipient "capitation agreements." Patients still have freedom to choose their physicians.

SB 481 (Certificate-of-Need) increases C-O-N from the present $150,000 to $600,000 for capital expenditures and $400,000 for medical equipment or services. Several late, detrimental amendments were defeated. MSMA supported.

SB 513 (Drunk Driving) increases penalties for repeat DWI offenders while reducing penalties for first offenses in an effort to obtain more convictions. It allows suspended sentence only for first-time offenders and sets up a central records file to log DWI convictions and suspensions.

SB 520 (Chiropractic) expands practice of chiropractic to entire body and allows chiropractors to instruct patients in matters pertaining to hygiene, nutrition and sanitary measures. MSMA opposed until amendments were accepted.

SB 522 ("Kiddie Dope") outlaws the sale of simulated controlled substances packaged to appear like illicit drugs. This bill prohibits sale of drug paraphernalia such as "roach clips," hash pipes and other goods used in the taking of illegal drugs. MSMA supported.

SB 580 (Teachers Physical Exams) deletes a statute which required teachers to obtain an annual physical exam. Teachers were the only group so mandated. Local school boards, if they so choose, can reinstate the requirement. MSMA supported.

SB 785 (Marriages of Epileptics) eliminates a statute which prohibited the solemnization of a marriage if one of the individuals is known to have epilepsy. MSMA supported.

SB 842 (Nursing Home Treatment) allows trained personnel in licensed long-term care facilities to administer medication, including injections of insulin.

SB 717 (Ellis Fischel) reorganizes Ellis Fischel Hospital in an attempt to revitalize the facility. This bill contains a three year time limit. MSMA supported.

Other bills of interest to physicians will be summarized in an "all member" legislative mailing soon.

Bills that failed to gain legislative approval often are as important to medicine as those that are adopted. Bills which did not pass are listed.

- Licensure Bills — Radiologic technicians, occupational therapists, physician's assistants, social workers, athletic trainers and physical therapy assistants all sought licensure. MSMA opposed all attempts, and most bills died in committee.
- "Wonder Drugs" — Bills legalizing the use of Laetrile and DMSO and a bill allowing the use of marijuana in some cancer treatments failed to clear committees. Neither did a bill opening up acupuncture for use by non-physicians. MSMA opposed all but the marijuana bill, which we had no position on.
- Access to Medical Records — This bill would have allowed patient access to medical records. MSMA withdrew opposition after safeguards were placed in the bill.
- Separate Department of Health — This bill was designed to give more emphasis to health rather than the present "health and welfare" setup. This bill failed to gain much spark except from health care professionals. MSMA supported.
- Child Auto Restraints — This bill reported from committee too late to be debated. The bill would have mandated use of approved auto restraints for children under four years. MSMA supported.
- Medical Professional Liability — This bill would have required the losing party in a malpractice suit to pay the costs of the other party. It failed to clear committee. MSMA supported.

If you have questions on these or other bills, please contact MSMA Headquarters, P.O. Box 1028, Jefferson City, Missouri 65102.

Support candidates

"Perhaps you tire of hearing it . . . but it is becoming obvious that those individuals (or groups) who support candidates financially are the ones who are listened to by Legislators," so says John I. Matthews, M.D., MSMA president and chairman of the Committee on Legislative Affairs.

"If physicians and their wives would support the candidates of their choice and then inform their elected officials on the issues, we would not have to 'give ground' as we did on the chiropractic bill.

"But, how do we get physicians interested in preserving good medical care in our state? Pleas have been made from the state and local levels, but to little avail. If you have suggestions, please forward them immediately so that we can begin implementing them.

"As a start," urges Matthews, "send a check to the State Senate and Representative candidates of your choice . . . **now**!"

Scenes from the MSMA Annual Convention April 1 - 4

Above, Dr. John I. Matthews, 1982-83 MSMA president, and his wife Peggy; **far left,** Dr. John J. Coury, guest speaker from the AMA; **immediate left,** Dr. Irving H. Clark, voted MSMA president-elect for 1983-84; **below left,** Dr. Durward Hall, honored with MSMA's first award for Citizenship and Community Service; and **below,** Dr. Wilfred Wooldridge, speaker at the opening session and retiring editor of *Missouri Medicine.*

MISSOURI
STATE
MEDICAL

Chief residency fund named for Dr. Ernest T. Rouse

Washington University School of Medicine, in St. Louis, now offers a funded chief residency in general internal medicine. Normally only professorships are endowed or funded.

Wesley J. Barta, former chairman and president of Chromalloy American Corporation and chairman of a Chromalloy subsidiary, the Valley Line Company, gave a $50,000 gift to the University.

According to David M. Kipnis, M.D., Adolphus Busch professor and chairman of the department of medicine, the fund honors Ernest T. Rouse, M.D., Barta's physician, who is in private practice in Clayton. Rouse is also associate professor of clinical medicine on the part-time faculty of the Washington School of Medicine.

The Dr. Rouse fund will be used to support the teaching responsibilities of the chief resident in the Department of Medicine.

With additional contributions from the Department of Medicine and professional colleagues, the Rouse Fund now stands at more than $110,000.

Physicians win portable TVs

Four MSMA members became prize winners during Annual Convention. In an attendance drawing Drs. Paul B. Anderson, Neosho; Herbert E. Arst, Kansas City; H.E. Petersen, St. Joseph; and medical student Tom Reardon, Kansas City, won portable television-radio sets.

Fees increase 0.5%

Physicians' fees rose at a rate of 0.5% in March, according to Consumer Price Index data. The increase was less than the rate of increase for the overall medical care index (0.8%), but greater than the changes for the all-services index, which rose 0.1%, and the all-items index, which declined by 0.1%.

The March data showed that hospital room charges increased 0.9%, dentists' fees rose 0.7%, and prescription drug charges were up 1.3%.

In the 12-month period ending with March, the all-items index increased at the rate of 6.8%, while the all-services index rose 11.3%. The physicians' services index increased by 10.3% during the period.

The annualized change for the past five years is the same for all items in the index and for physicians' services — up 9.7% — while the rate for all services rose 11.4%. The annualized rate of increase for hospital room charges is 13.1%.

Trauma centers lower highway deaths

The state's new trauma system appears to be positively effecting emergency care for Missourians.

According to a report from the Missouri Division of Health last year's accidental death rate dropped to the lowest level in at least 50 years. In 1981, an estimated 2,254 Missourians died in accidents; that is 14 percent below deaths reported in 1980. Automobile related deaths also dropped by 16 percent.

The development of the trauma system, implemented Jan. 1, 1981, is partly responsible for this decline, says Dr. Mohammad N. Akhter, state health director. On Feb. 6, 1982, Dr. Akhter told the MSMA Council that over 100 physicians around the state had assisted in establishing the system.

Presently, 54 hospitals have been designated as trauma centers. Only four hospitals in the state have been awarded level one ratings, the highest award level. Level one centers must meet 115 criteria and provide a full range of 24-hour trauma care services, equipment and trained personnel. Levels two and three meet less demanding requirements.

The 1981 mortality statistics show that trauma centers, even in their first year, are meeting the objectives which were outlined over a year ago. "The trauma care system will most significantly improve care for those victims with severe injuries," said Dr. Akhter at the Missouri Committee on Trauma in early 1981. "We want to develop a system of care that will not only lower the mortality rate of patients with multiple trauma but will also reduce the possibility of permanent disability."

Trauma care designation programs have been established nationwide and have become a prerequisite for funding of emergency medical services implementation under Title XII programs.

European tour schedules set

Explore Europe, while expanding your medical education, through two INTRAV tours now being offered to Missouri State Medical Association members.

A 15 day Scandinavian Adventure will offer members a chance to fully explore the Land of the Vikings. Participants will see Stockholm, Helsinki, Oslo and Copenhagen, plus they can take side-trips to Leningrad and the Norwegian Fjords. Departure from Kansas City and St. Louis is July 14 with return on July 28, 1982.

A second tour, a two week tour through Europe's most popular capitals, will depart St. Louis and Kansas City on August 23 and will return on September 5, 1982. This adventure includes stops in Europe's big three: Paris, Rome and London.

Both summer tours offer physicians a comprehensive program of medical seminars. Participants in the continuing medical education program will receive hour for hour credit in Category Two of the Physicians Recognition Award given by the MSMA and the American Medical Association.

For more information contact MSMA, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

PR Update

This month 23 television stations around the state will be receiving three public service announcements which contain the Missouri State Medical Association's logo. The PSAs focus on teenage smoking, adult alcohol abuse and health care costs containment.

All MSMA members are encouraged to watch for these tapes on the television stations in their area and make personal requests for their airing. Announcements are distributed periodically to all Missouri television stations.

Toll free number available

The Missouri Bureau of Communicable Diseases has installed a toll free telephone line to help physicians make their reports promptly. The toll free number is 800/392-0272.

This toll free number can be used Monday through Friday, 8 a.m. to 5 p.m., except on state holidays. The toll free number should be used exclusively for reporting communicable diseases. Other calls to the Bureau of Communicable Diseases can be made by dialing 314/751-2713.

If the toll free number is used to report a problem or to seek consultation with a staff member of the Division of Health, the caller's name and telephone number will be taken and the proper person will return the call.

Prescriptions interpreted as short-cuts to communication

Patients who don't get prescriptions are more satisfied with physician-patient communication, according to a study in the *American Journal of Public Health*. Authors of the study of middle-aged economically secure adults in a prepaid group practice believe prescriptions may be a short-cut substitute for more meaningful communication such as "taking time to understand and answer questions, give explanations, and show a friendly interest in the patient."

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
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1982 MMPAC Sustaining Members

Listed below are MSMA and Auxiliary members who have paid $100 to become Sustaining Members of the Missouri Medical Political Action Committee. As of May 4, 1982, 70 physicians and spouses have become Sustaining Members.

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References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

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THE PATIENT THINKS
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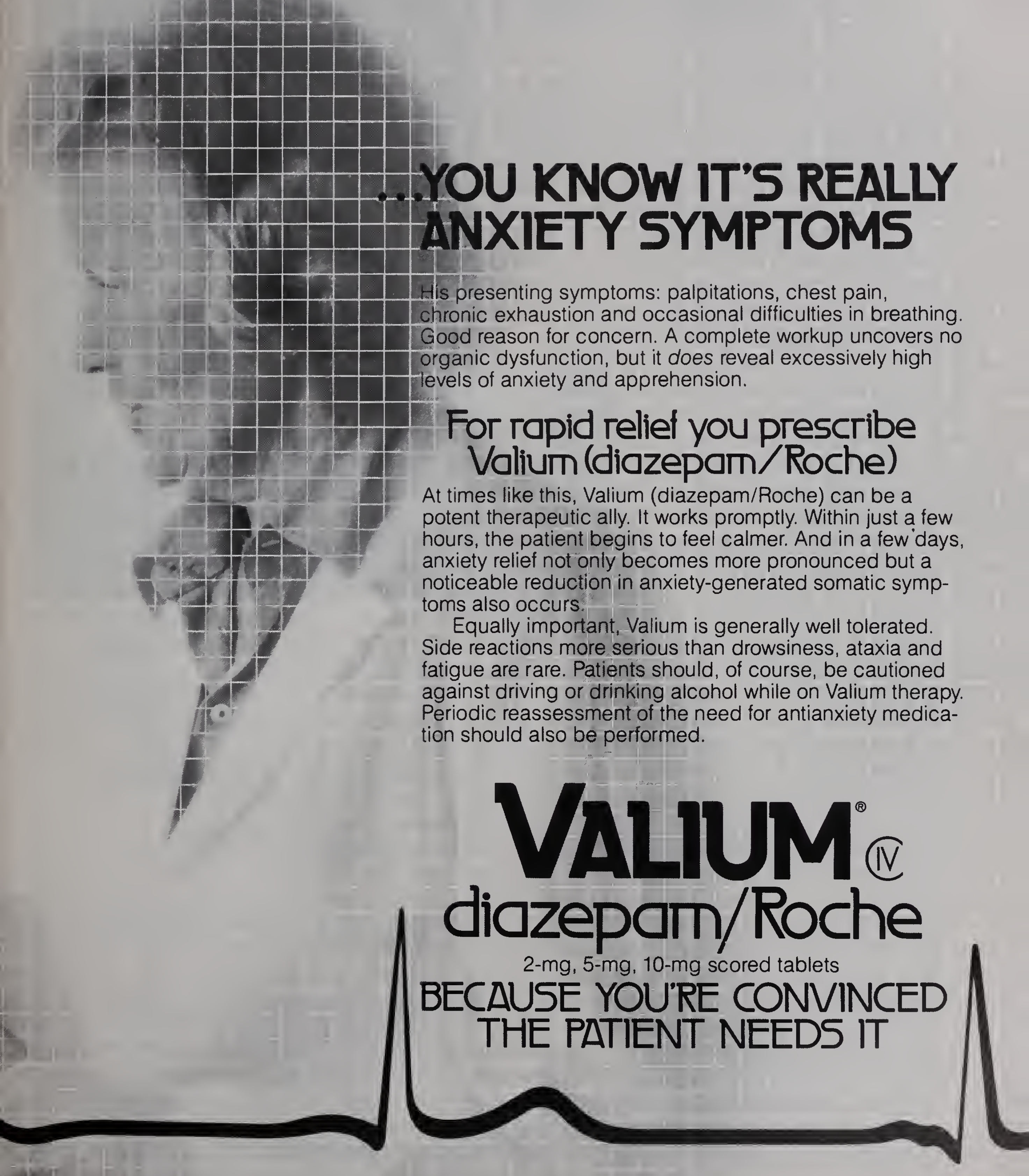

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> ***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

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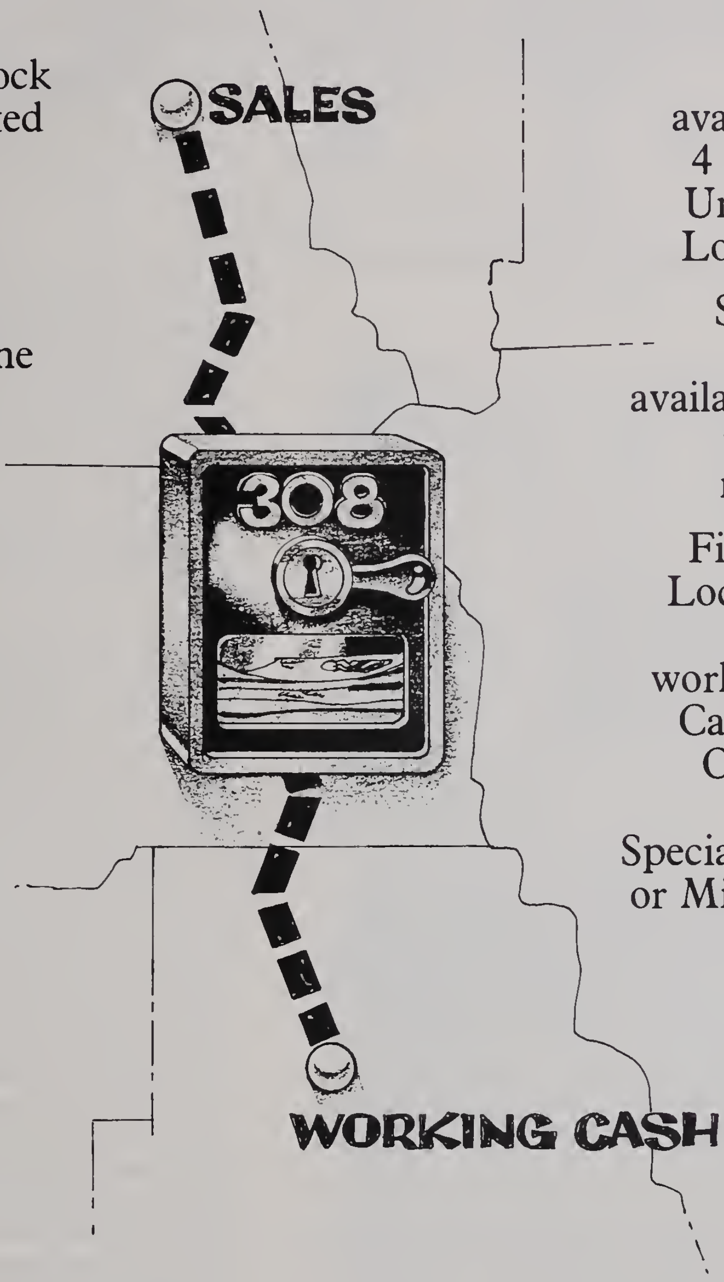

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Special Feature

The Historical Background of Where American Medicine Is Today and How It Got There

By
WILFRED E. WOOLDRIDGE, M.D.
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President Hansbrough, Friends:

I appreciate, very much, the invitation to speak before this body. It is an occasion I shall always remember as being a highlight of my medical career. Considering the tremendous scope of my subject, let us now get down to business. We have a long way to go.

All of you know very well that a dermatologist is almost inarticulate without Kodachromes$^{\text{TR}}$. I do have three slides to show you, but they are not what you expect, but neither are you going to hear what you expect. The first of these slides shows a small fragment from a wall painting of an ancient Egyptian tomb. The symbol you see is the eye of Horus. The second slide shows the entire panel of the wall painting with an ill Egyptian worker petitioning the ibis-headed god, Horus, to restore his health. At the top of this panel, you will notice the eye of Horus. The third slide shows a paragraph from a book on medical history and explains how the eye of Horus gradually evolved into the figure (♃), which was the sign of Jupiter. That sign evolved, in turn, into our familiar (℞), which precedes every prescription written today (page 260).

MISSOURI MEDICINE takes pride in presenting the accompanying address delivered by Dr. Wooldridge at the General Session on April 2 during the 124th Annual Convention of the Missouri State Medical Association in Kansas City.

To quote Mr. Mark Zieman, staff writer for the *Kansas City Star/Times*, this was "a dramatic speech by Dr. Wilfred E. Wooldridge who weaved through the historical background of the medical profession, giving his audience examples of trends that he said have destroyed societies and the medical profession in the past and are threatening to destroy them again today." Dr. Wooldridge supported his statements with historical facts.

Dr. Wooldridge is the retiring editor of this journal. He is in the private practice of dermatology.

Now, why all this? I have no intention to embarrass anyone who did not know about these symbols. I confess I found out about them by accident. I only wish to show a symbol which each of us uses everyday, but we have so little curiosity that even a group of highly educated people like yourselves probably would not know from whence the symbol came.

But, here is my point! The point is that the answer is clearly there in history, if only we care to look for it. There is a lot more in history, a lot more in history closer to home and a lot more in history very intimately related to problems which affect you and me today.

In 1982, it is certainly an understatement to say American Medicine is a deeply troubled institution. It is fighting a battle which, in my opinion, it has already lost. Commendably, it is making a desperate effort to salvage as much as possible from the wreckage. How are we to see our problems in proper perspective? Are we faced with an entirely new set of circumstances for which there are no precedents or, to the contrary, is history simply repeating itself and updating the scenery. I will give you some examples that will have a familiar ring:

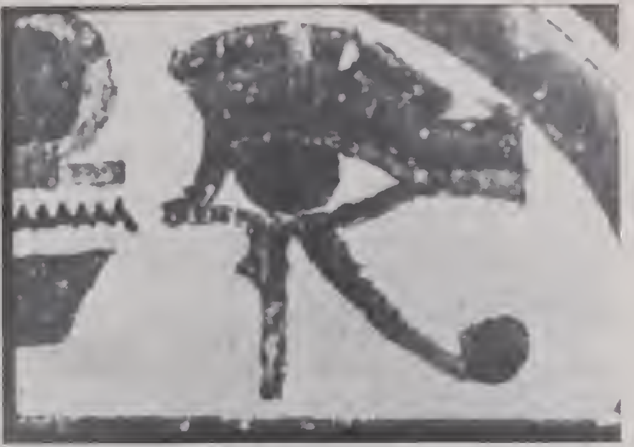
1. As long ago as 2500 B.C., the Pharoah of Egypt expressed doubt that a single physician was equal to confronting all the ills of the complex human body. Therefore, he appointed one very important doctor as "Shepherd of the Anus." He even had one doctor as guardian of

his left eye and another for his right eye. This should humble those of us of the 20th Century for overlooking such a wonderful possibility for additional specialization.

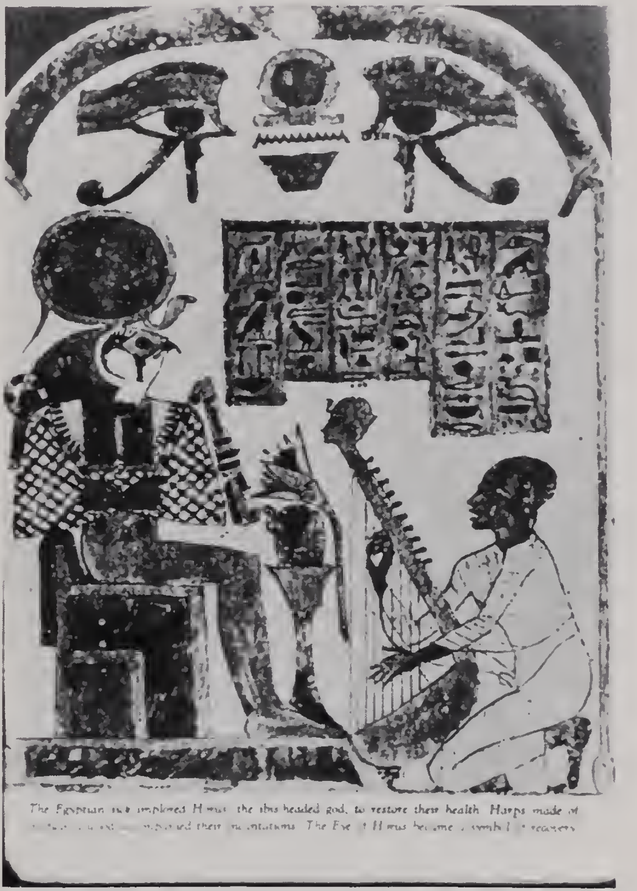
2. Another example. The ancient Greeks evolved a system of billing for medical services according to the patient's ability to pay. There remain records of a grateful boy who paid only a few copper coins for being healed of a weak leg. A nobleman paid the equivalent of $10,000 in gold for the restoration of his sight. Often, payment was made with ingots of precious metals on which were stamped replicas of the healed organs. Today, in the National Archeological Museum in Athens there are some of these slabs of gold and silver. On one is engraved a pair of eyes and a prayer beneath thanking the gods for the relief of blindness. On another is engraved a pair of lungs and the tracheobronchial tree, together with two sentences of gratitude for the cure of what sounds like asthma. On still another is a penis and a pair of testicles, but the dignity of history is mercifully preserved by the lack of any inscription.
3. Still another example. About 100 B.C., the Greek democracy began to fade rapidly. Interestingly, this coincided with the time when there was a great upsurge in homosexuality. Homosexuality had always been on the fringe of Greek society, as in every society, but at this time, homosexuality became condoned, even encouraged and was no longer thought to be aberrant behavior but an acceptable way of life. It was pointed out that dogs and other animals practiced homosexuality and, as dogs will have their day, so did the Greeks. They went into eclipse in an orgy of licentiousness. At the same time the Greeks declined, the Roman Empire began its rise to dominate the Western World.

As all of you know from the classroom, Rome prospered for a long time. Its government, its men and its morals were trim and lean. But Rome made a *fatal* mistake. Rome grew rich. Now, throughout history, growing rich has been a mistake because human nature cannot tolerate prosperity for very long. Even physiologically, the human organism is marvelously able to adjust to starvation. It is much less able to tolerate growing too fat, and the Romans grew too fat.

At last, luxury, and its usual accompaniment of debauchery, caught up with them. About that time, women were emancipated from what they came to consider the intolerable insult of the home. There was a great movement throughout Roman society to promote sexual freedom. Parlor conversation revolved around the effectiveness of various contraceptives. Again, homosexuality became fashionable. The topic of the day was sex and it was exploited in every possible way. From

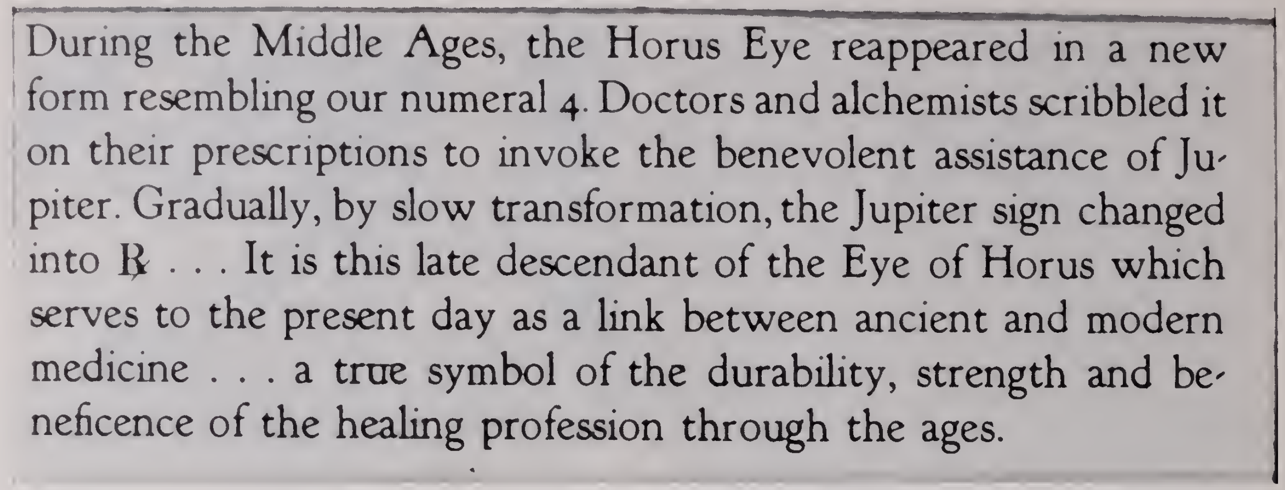


Slide #1



The Egyptian sick implored Horus, the ibis headed god, to restore their health. Harps made of [illegible] accompanied their incantations. The Eye of Horus became a symbol of recovery.

Slide #2



During the Middle Ages, the Horus Eye reappeared in a new form resembling our numeral 4. Doctors and alchemists scribbled it on their prescriptions to invoke the benevolent assistance of Jupiter. Gradually, by slow transformation, the Jupiter sign changed into ℞ . . . It is this late descendant of the Eye of Horus which serves to the present day as a link between ancient and modern medicine . . . a true symbol of the durability, strength and beneficence of the healing profession through the ages.

Slide #3

that point, on, regardless of the cause, Roman history was all downhill.

With these illustrations, and there are many more, I am attempting to show you that there exist in history many parallels by which we might judge the present. I might, also, indicate how little attention we pay to them. So, with what I have said as a background, let us attend to the present.

Today, at least as I see it, we doctors are beset by three great categories of problems. These problems are complex. They are, for the most part, entirely beyond control of the medical profession. These problems are (1) Social, (2) Governmental and (3) Medical. It is immediately apparent there would be considerable overlap between these problems, but let me define them as best I can.

1. *Social*. To appreciate the depth of this problem in today's America, you must admit that, while men may be conceived in equal, if diminishing, liberty that the preamble to our Constitution is rank foolishness when it implies that all were born equal in other respects. Nowhere more than before a medical audience should it be realized that inequality is natural and is inborn. This is true not only for man, but for every other specie of animals and plants. This inequality becomes even more accentuated with increasing complexities of society. The more involved the situation, the greater the opportunities for the more intelligent members of society to profit at the expense of the less intelligent. It is this very fact that makes 20% of Americans more than the intellectual and material equals of the other 80%. It has always been that way and, under one guise or another, it will always be that way.

Do not misunderstand me! I am not expressing this inequality in terms of race, color or creed. Each group has its superior and its inferior members and in the same percentages. I do point out the futility, however, of the hard core of social do-gooders who maintain that the lesser intellects among us are lesser because of less opportunities. I can assure you that equal food and equal education will never make of those members what the Lord failed to do at the time of conception.

Nevertheless, an increasing amount of our resources and energies have been diverted over recent years to that segment of our population that is the least capable of response. So, in a society that expends itself increasingly on the mediocre, we automatically have a society that plays down the much smaller number of superior members and which down-grades the exceptional. Such utopias are biologically doomed. One of the first evidences of this degradation will be the erosion of the rights and privileges of the superiors members of such a society simply because they are in a minority and, my friends, this is exactly what has been happening in America during the past 40 years, and we still have the same poor and the same disadvantaged. We have simply lowered our standards.

2. Next, the *Governmental* problem. As it applies to the physician, this problem is

> more easily explained than is the social. Quite simply, the heart of the problem is that we have swung further and further from the intent of those who framed our Constitution. I would like to stand here this morning and see the expressions on the faces of the signers of our Constitution when they observed how that document has been prostituted in 1982. The most important, and basic, problem is that we have gradually ceased being a Republic and that one only now hears we are a Democracy. There is a very great and a very fundamental difference.

If one reads the Constitution and, quite obviously, most of our legislators have not, the word "Democracy" is never mentioned. Our government is always referred to in that Constitution as a "Republic." So, what is the difference? The difference is that a republic is governed by those who have a stake in it. In a democracy, every person, no matter how stupid or unproductive, has an equal voice in the government.

One day, when Benjamin Franklin was leaving the meeting of the Constitutional Convention, a reporter stopped him and inquired, "Mr. Franklin, what sort of a government are you giving us?" The answer was "A republic, if you can keep it!" This basic difference between the republic and the democracy explains why republics have occupied important places in history and why democracies have never been more than very beautiful, and very transient, dreams. Imagine, for example, trying to operate a successful business, church or even a home when the most indolent, laziest, least intelligent individual can have a vote equal to that of the most industrious, ingenious and sensible. But this is what we are doing on a federal level. In 1815, John Adams warned his countrymen, "Remember, democracy never lasts long. It soon wastes, exhausts and destroys itself." In a news release of December 28, 1975, Alexander Solzhenitzyn, who was receiving an honor in Brussels, said, "You have an impression that democracies will always last. You do not understand that democracies are lost islands in the immense river of history and that the water is always rising. The simplest laws of history play against democratic societies."

Well, enough for definitions. This all sounds fine, but the real trouble in the democracy comes in the back door as the unrestricted welfare concept comes in the front. This has nothing to do with the care of our genuinely unfortunate. "Mr. Average Man" constitutes a very appreciable percentage of our population and Mr. Average Man is shrewd enough to see that, if he is working to get along, he will not continue that way if he can see that his next door neighbor doesn't work at all and gets along about as well. Therefore, this inclination to relax and become a non-working ward of the state, if Mr. Average Man has any sense whatever, perfectly explains why our welfare rolls have grown steadily since World War II in spite of what all economists have termed a period of prosperity. As you well know, economists do not agree on very much, but they do agree on that. During this time of fantastic prosperity, the number of those receiving public assistance has steadily grown and it is promoted in every possible way by federal and state bureaucrats whose jobs depend on having more and more people under their administration.

Two centuries ago, an English economist, Alexander Tyler, made the following statement: "A democracy cannot exist as a permanent form of government. It can only last until the voters discover they can vote themselves largess from the public treasury. From that moment on, the majority always votes for those candidates promising the most benefits with the result that the democracy always collapses because of impractical fiscal policy and is always followed by some form of a dictatorship."

I have just dealt with the weakness of the individual in the determination of government. Now let me deal with the second, and directly related, facet of the problem, the legislator. For many reasons, I believe that a federal or state legislator should be elected to a considerably lengthened single term and that he should not be permitted a second term. I will admit this would deprive the nation of some experience, but it would at least partially be compensated for by the longer term. Most importantly, however, such a rule would free the legislator to focus his attention on solutions rather than the impact of his vote on the next election. To put it more bluntly, I believe all of us are thoroughly aware that decisions in American government today are made much more on the basis of expediency and personal featherbedding than on right or wrong.

In our own state of Missouri, you will remember Stuart Symington, a long-time Senator. Senator Symington had been a most influential man on the national scene from the years prior to World War II until he retired a few yeas ago. Shortly after he announced his retirement, he was in Springfield (Mo.) and was candidly interviewed on one of our television stations. One of the questions asked him was, "Senator, when does a politician become a statesman?" The reply was, "When he ceases to run for reelection." This being true, may I remind you that, historically, things only get worse because the productive in society will become fewer while the marginal and unproductive demand and vote themselves more and more. This is the very structure which is known in economics as the "Iron Triangle." This triangle consists of the legislator who authorizes to gain votes, the bureaucracy created to administer and the citizen group that benefits. If you don't think this is a touch combination to beat, just try! Ronald Reagan is being educated right now.

However encouraging the mandate seemingly given in 1980 may be, I think we will look back on that and find the genuine pressures applied to turn things around brought outcries from recipients at all levels and those, together, overwhelmed efforts at change. You are beginning to see this now. You will see it quite clearly in the fall of 1982.

3. Next, the *Medical* problem. Now, let me deal with some of what besets our American medical profession today, after the related remarks I have given above. At this point, permit me a little time to philosophize because here I am on very familiar grounds. I am now what is termed an "elder physician." I first realized this whenever the younger fellows began calling me "sir." This "sir" means you've had it.

I have a very intelligent friend who is deeply involved in the delivery of health care in America. He is concerned because he has had many millions of dollars invested in a large and successful chain of pharmacies. He has been worried about the increasing intrusion of the federal government on our private lives, its effect on his business and on the nation. At a time when Wilbur Mills was chairman of the Ways and Means Committee, and was probably the second most powerful man in the United States, my friend gave a very substantial contribution to the campaign of Mr. Mills and was granted a long, private audience with him. During that meeting, Mr. Mills said, "We will certainly have total nationalized medicine in this country sooner or later. The only reason we do not have it now is that we have not figured out how to pay for it." My friend had just returned from a tour of the West Coast where he had been investigating HMOs and he replied, "But Mr. Mills, this is medicine for cattle, not Americans. Americans are not used to it." The only reply was a firm assurance, "This is the way it will be."

So, from this standpoint, medicine is being crowded into a corner by forces much more powerful than it can hope to control, but I would like to point out that I cannot hold medicine blameless because medicine has gone a long way toward fouling its own image.

It is inevitable that the increasing sophistication of medical practice will result in some depersonalization. Nevertheless, the ace card held by the physician is that the patient who comes to him has entrusted that doctor with his or her health. This is an extremely personal association and this trust can only be repaid by the doctor when he extends a genuine personal concern. I think that you people who live in smaller communities with your patients have done a much better job of extending this concern than have many of my people who work in various specialties. There is no way on God's green earth that a two-hour post-prandial blood sugar can take the place of this personal concern. If the doctor fails to develop this rapport with his patient, he might be a scientific triumph, but he will be a personal flop in the ultimate mission of the physician. This is precisely the reason why a really adroit chiropractor can make more money than most of us can ever make. He has little to sell except salesmanship, but he is a superb salesman and he is something to watch when he swings into action. For a while, he can make more worried and fretful people feel better than a whole warehouse full of test tubes because he oozes personal concern. We are not always good at this and, in a seller's market, we have become less good. We have forgotten that, first of all, we are treating humans. If our profession were really cashing in on the tremendous asset of public esteem that is available to us, we would enjoy a great umbrella of protection. As it is, I fear we are often playing the game without trumps.

I think we medical men could learn a great deal from the point made in one of the beautifully conversational sonnets of Edwin Arlington Robinson called "Cliff Klingenhagen":

Cliff Klingenhagen had me in to dine
With him one day. And after soup and meat,

And all the other things there were to eat,
Cliff took two glasses and filled one with wine
And one with wormwood. Then, without a
sign
For me to choose at all, he took the draught
Of bitterness himself and lightly quaffed
It off and said the other one was mine.
And when I asked him what the deuce he
meant
By doing that he only smiled
And said it was a way of his.
And though I have known him well, long
time
I've spent a'wondering when I shall be
As happy as Cliff Klingenhagen is.

This is a marvelously poetic way of expressing a thought which can very simply be reduced to a single word — Humility, a word which today's American doctor would do well to try to recall. Somewhere, he lost it.

So, this is where we doctors are and this is how we got there — squarely behind the eight ball. We are enveloped in an emerging socialistic state with all of its syrupy propaganda and its faulty misconceptions that won't work down the line and for exactly the same reason that the democracy won't work. Regardless of what we do now, we can be sure that the best times for medicine are behind us. We simply have too many people and too much power to confront. There will be a slow, an inexorable and a steady encroachment on our ability to practice as we choose, both medically and financially. There is not one of you in this room who will live long enough to work with the freedom we all enjoyed 20 years ago. This deterioration of medical practice is bound to occur, partly because of our own mistakes, but to a much greater extent because the great mass of citizens in this, or any democracy, are not of the moral fibre to rule themselves. For this reason, it is not only medicine which will go down the drain; it is only that medicine will go first because it is the most accessible and America will have become another society of dreary mediocrity because Mr. Average Man wanted it to be that way. He had the power but not the intelligence to know what was happening.

The ancient Romans, in the waning days of the empire, gave their citizens what they called "bread and circus." In other words, keep the man in the street fed and, if he becomes restless, amuse him by feeding a few more Christians to the lions. Today, we have ideal examples of the "bread and circus" philosophy. The politician is more than happy to extend so-called "security" because, in doing so, it vests him with immense power. Mr. Justice Brandeis of the United States Supreme Court, in the case of Olmstead versus the United States in 1928, handed down a famous opinion. He said, "Experience teaches us to be most on our guard to protect liberty when the government's purposes are benificent." The people of the United States never listened, friends. We still aren't listening and most of the people couldn't care less what Mr. Justice Brandeis said. They don't even understand it.

At this point, may I say I would rather not have made you uncomfortable this morning although if I have done so, that would mean I am getting through. It has been my desire to make you think. I would have been far happier to preach some doctrine of sweetness and light but, if that is what you want, you can find plenty of people who will preach it to you. Instead, I think it is time that we admit several loved ones are sick! America is sick, Medicine is sick, and, most of all, our constitutional government as it has been abused.

Everything I have said here has a firm foundation of historical precedence. If there is not an abrupt turnaround of critical attitudes countrywide, what I have said, will certainly occur, not because I am a prophet, but because it has always happened that way.

An old saying, which is very apropos, is that "Liberty is never rudely snatched away. It is surrendered, piece by piece." There is, then, a point of no return in society and we are rapidly approaching that point. The American poet, Robert P. Tristram Coffin, summed it up so very well:

Pity us all, who shrink and perish
Thought by thought, red fall by fall.
Whose youth goes on the long autumnal
journey
And comes back, not at all.

Friends, nothing would please me more than a quarter century from now to find out I was dead wrong, but I am not. Thank you.

Famous Pairs.

They work so well together.

One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.

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Anusol-HC® & Tucks®

...another well-known pair that works so well together! Ninety-five percent of colon/rectal surgeons surveyed added Tucks pads concomitantly to hemorrhoidal treatment programs they recommended.*

TUCKS
Pre-Moistened Hemorrhoidal/Vaginal Pads
PARKE-DAVIS
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Anusol-HC®
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*The #1 physician-prescribed product for hemorrhoids and other common anorectal disorders***

- ☐ *Antiinflammatory, to relieve edema, burning, itching, pain*
- ☐ *Astringent, to help promote healing*
- ☐ *Emollient, for easier bowel movements and soothing relief of local trauma*

And, when pain is a special problem, Anusol Ointment offers the benefits of the anesthetic, pramoxine HCl.

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The #1 hemorrhoidal pad† for added external relief and gentle cleansing of fecal residue

- ☐ *Soothes, cools, comforts the irritation and itch of hemorrhoids and other common anorectal disorders*
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Once pain and inflammation subside, for dual action recommend regular ANUSOL®—to maintain patient comfort—and TUCKS®—to maintain patient anorectal hygiene.

**Meeting of Am Soc Colon/Rectal Surgeons, May 1980.*
***Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.*
†*1981 data from leading marketing research organization.*

ANUSOL-HC® Suppositories/
ANUSOL-HC® Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F [15°-30°C]

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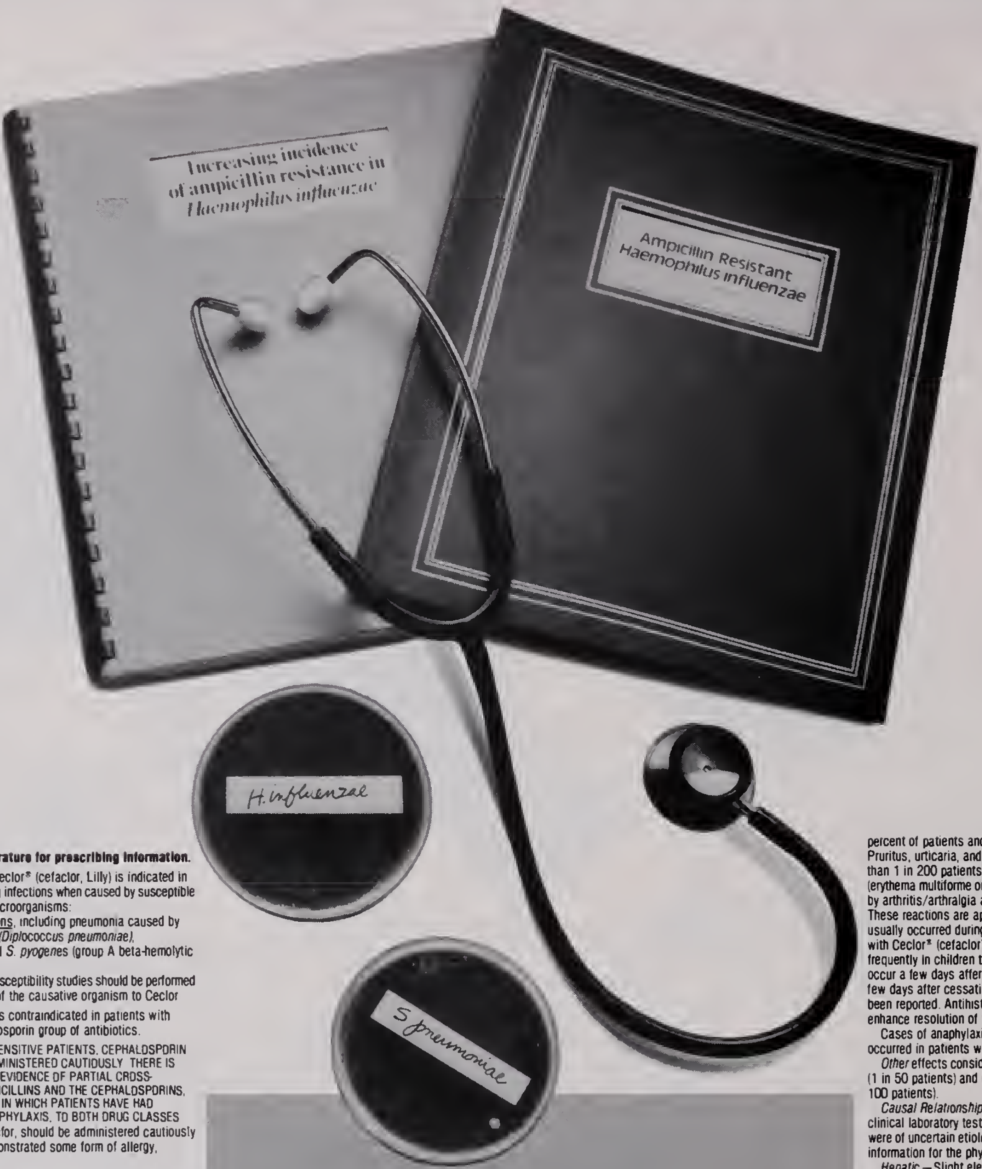
WARNER LAMBERT

PD-85-JA-0867-P-1 (2-82)

An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.$^{1-6}$

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90)

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*[8]

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Lilly

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Chest Case of the Month

LAWRENCE M. LAMPTON, M.D., WILLIAM D. SULLIVAN, M.D. and
JAMES D. MALTBY, M.D., Columbia

Tuberculosis Aggressively Refractory to the Triple Drug Therapy

Case Report

This 58-year-old male 75 pack-year smoker (pack-years equal the number of packs per day times the number of years) had a one-year history of a 10 lb weight loss associated with intermittent drenching night sweats, followed by seven days of anorexia, fever, cough and malaise. Significant past history included adolescent exposure to two family members with active tuberculosis. He also had a 40-year high level, chronic exposure to grain dust preceded by a five-year exposure to lead, zinc and copper dusts associated with mining.

Physical examination revealed a small right axillary lymph node, slightly labored respirations associated with intercostal retractions, and decreased breath sounds with diffuse rales and wheezes. His hematology and chemistry profiles were normal. His hospital course was marked by intermittent temperature elevation to 103F. The result of a tuberculin skin test (PPD 5 T.U.) was positive (13 mm) at 48 hours. Five early morning sputum collections were negative for the presence of acid fast bacteria, fungi, yeast or abnormal cytology.

Standard posteroanterior (PA) and lateral views of the chest showed a diffuse alveolar infiltrate involving the left upper lobe. There was a suggestion of a mass in the left hilar region (Fig. 1). PA and lateral multidirectional tomography revealed an oval-shaped mass that was 3 cm in greatest diameter and situated in the region of the apical posterior bronchus of the left upper lobe. There was no evidence of adenopathy in the aortopulmonary window or in the subcarinal region (Fig. 2). Chest films from 1975 and 1976, however, showed only a moderate degree of hyperaeration consistent with mild obstructive pulmonary functions.

Antituberculosis therapy (300 mg of isoniazid and 600 mg of rifampin daily) was instituted on the third day because of the clinical presentation. The recurrent fevers did not defervesce, and chest radiographs revealed an increase in the left upper lobe alveolar infiltrate with development of several areas of central lucencies.

A fiberoptic bronchoscopy to rule out an endobron-

The need for an aggressive diagnostic approach is typified by this case report of concurrent tuberculosis and lung cancer. The authors discuss helpful roentgenographic clues, epidemiology and management.

Dr. Lampton is Assistant Professor of Medicine, Dr. Sullivan is Senior Postdoctoral Fellow-Pulmonary Medicine and Dr. Maltby is Associate Professor of Radiology, Departments of Internal Medicine and Radiology, University of Missouri-Columbia Health Sciences Center and the Harry S. Truman Hospital.

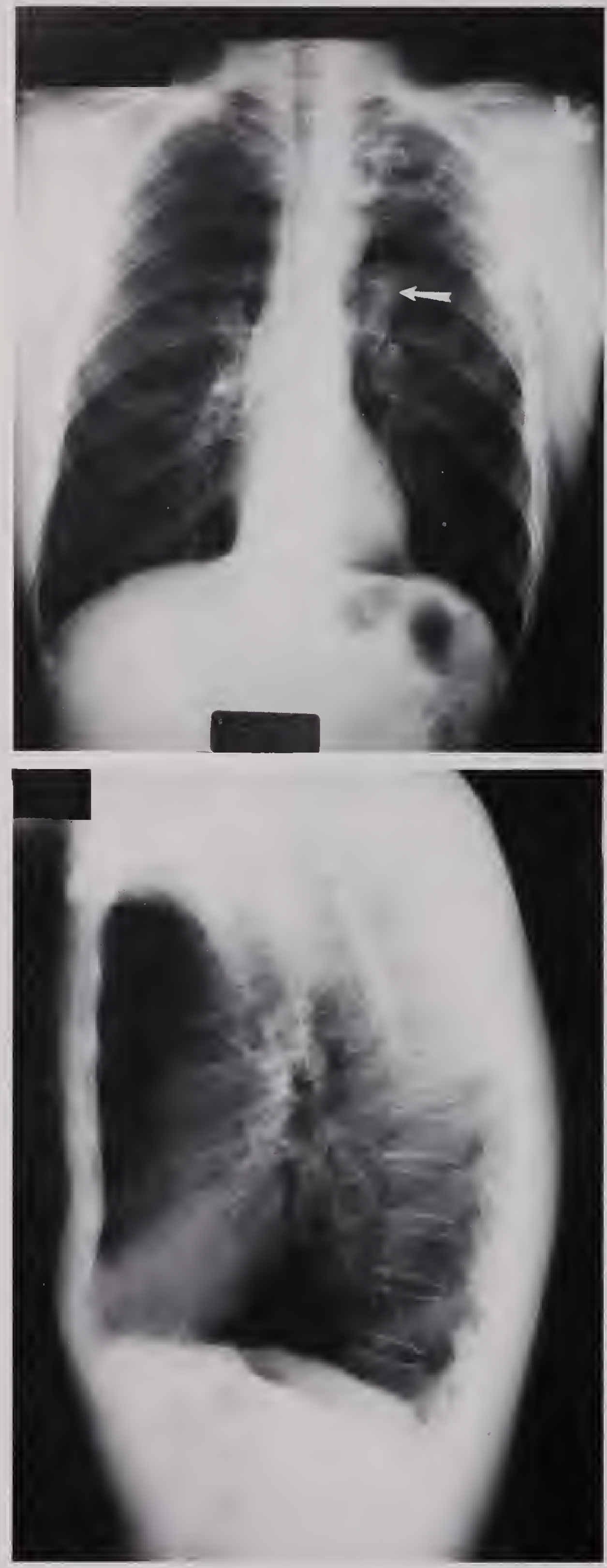

Fig. 1 PA and lateral views of the chest show an infiltrate in the apical-posterior segment of the left upper lobe. There is a suggestion of a mass in the superior aspect of the left hilum *(arrow)*.

chial obstruction demonstrated evidence of bronchitis and white gelatinous material partially occluding the anterior segment of the left upper lobe. Biopsy specimens showed cellular debris, hyperplastic bronchial glands and reactive changes of acute and chronic inflammation. No malignancy was detected and all specimen findings were negative for the presence of acid fast bacteria. Recurrent temperature elevations continued, and chest x-rays three weeks after admission demonstrated increasing spread of disease into the anterior segment of the upper lobe with markedly increased cavitation (Fig. 3).

A repeat fiberoptic bronchoscopy on the 21st day of hospitalization showed no new anatomical changes. The result of a bronchial washing was positive for acid fast bacilli. Transbronchial biopsy material demonstrated squamous metaplasia with large, hyperchromatic nuclei accompanied by purulent mucus in the anterior segment of the left upper lobe. The biopsy of the apical-posterior segment revealed inflammatory reaction, broad zones of necrosis and non-necrotizing granulomas containing numerous acid-fast bacilli. No fungal elements were found. Ethambutol (1,200 mg per day) was added to the therapy. No radiographic nor hematologic evidence of other sites of tuberculosis infection could be detected. After five afebrile days, the patient was discharged on the 33rd day of hospitalization without radiographic evidence of improvement. Subsequently, cultures of an initial sputum and the second biopsy specimens grew mycobacterium tuberculosis sensitive to the above antituberculosis agents.

Over the next three and one-half months, the patient remained afebrile, gained weight, and had little change in his chest radiographs. A month later, he developed hoarseness, a diffuse intermittent anterior chest pain, dysphagia and anorexia. The chest x-ray showed a large fluid-filled left upper lobe cavity, left lower lobe infiltrate and marked loss of left lung volume associated with upward retraction of the left hemidiaphragm and leftward mediastinal shift (Fig. 4). Multidirectional tomograms through the left hilum revealed a large mass at the carina deviating the trachea and obstructing the left main stem bronchus. The physical examination was compatible with the radiographic absence of left lung ventilation and revealed bilateral axillary adenopathy and a 2 cm x 3 cm left submandibular mass. Fiberoptic bronchoscopy revealed left true vocal cord paralysis and a mass obstructing the left main stem bronchus. Endobronchial specimen biopsy and a needle aspiration of the submandibular mass showed small cell carcinoma. No evidence for acid-fast bacilla could be found. Nuclear medicine scans of brain, bone, liver and spleen did not detect metastatic lesions. The patient declined chemotherapy but accepted palliative radiation to the left hilar mass.

DISCUSSION

The coexistence of pulmonary tuberculosis and lung cancer is well known. Most series report that

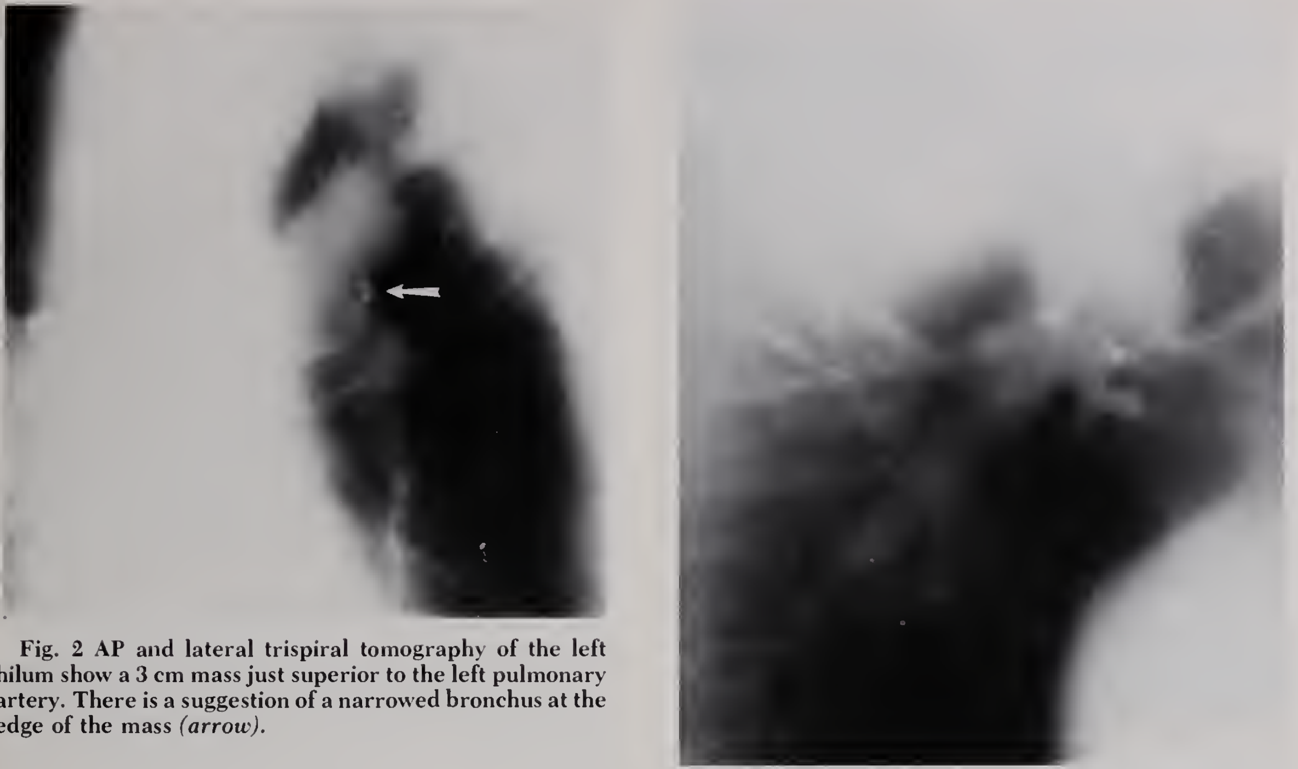

Fig. 2 AP and lateral trispiral tomography of the left hilum show a 3 cm mass just superior to the left pulmonary artery. There is a suggestion of a narrowed bronchus at the edge of the mass *(arrow).*

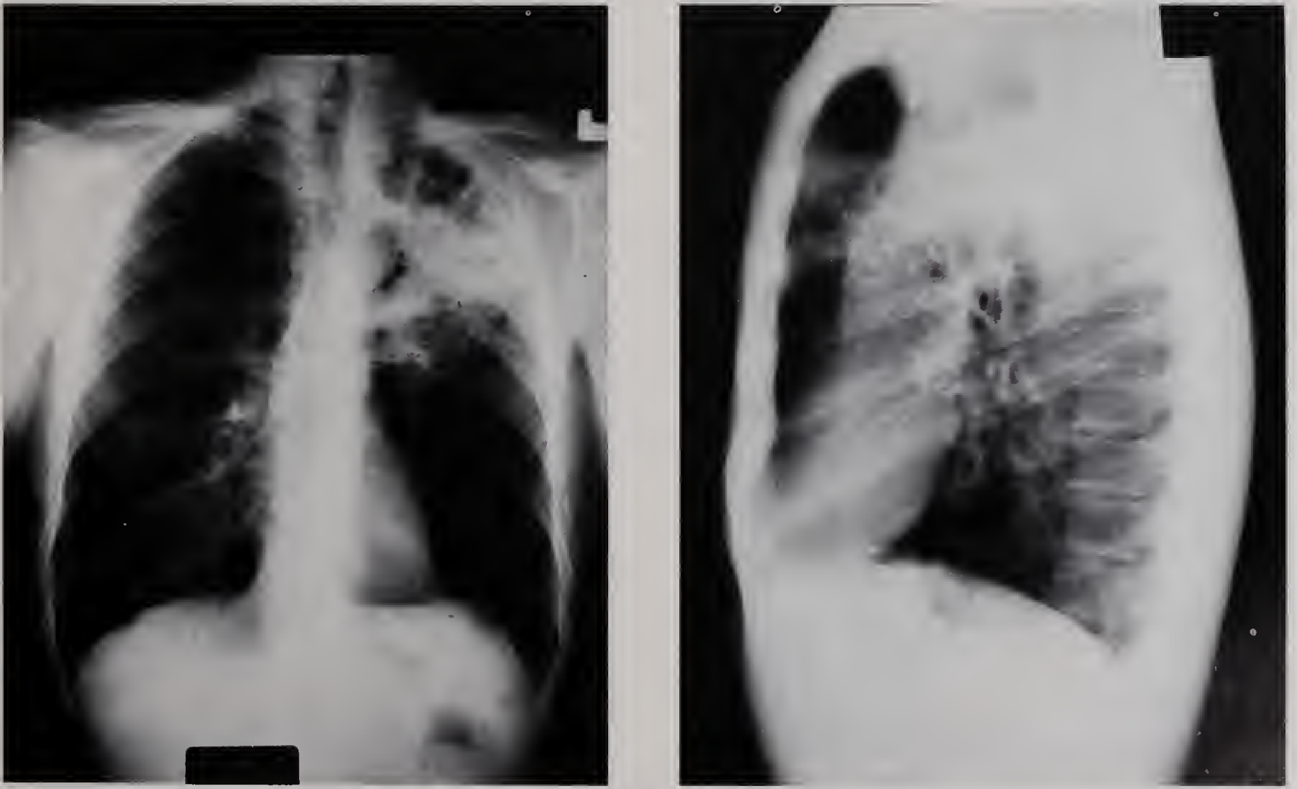

Fig. 3 PA and lateral views of the chest three weeks after the initial film showed spread of the infiltrate into the anterior segment of the left upper lobe with definite cavitation.

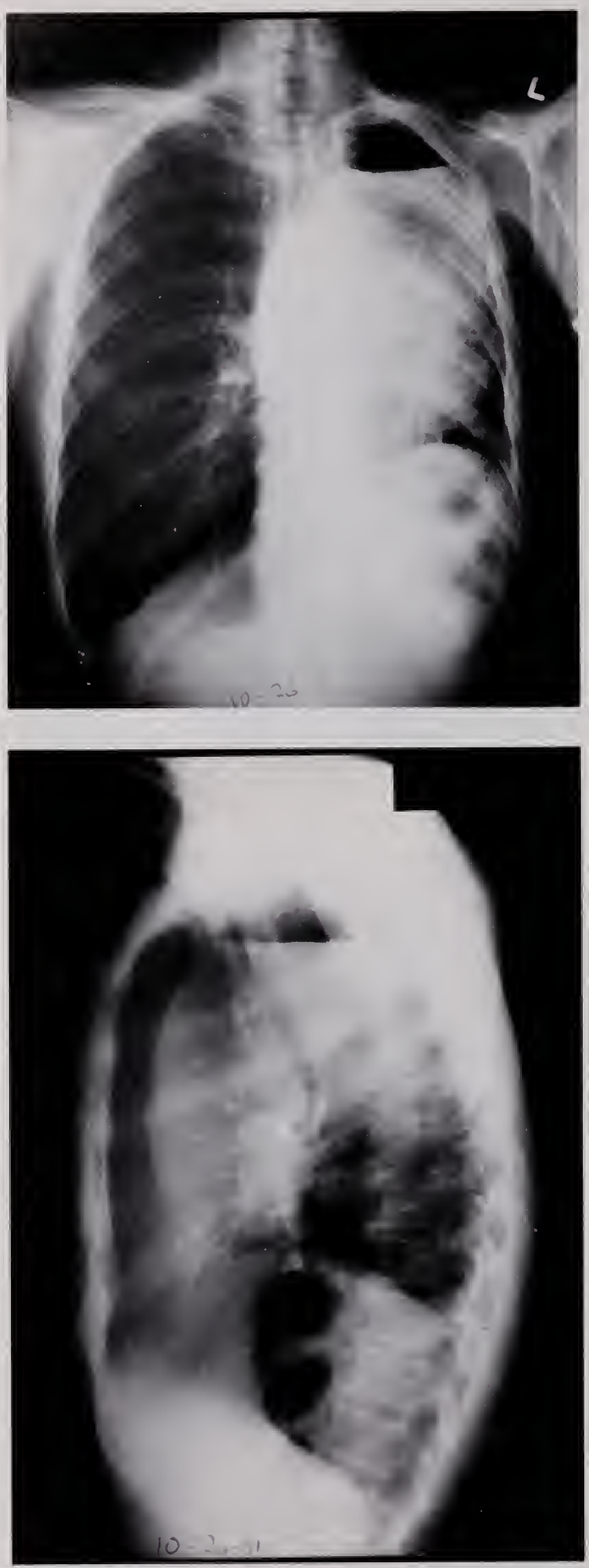

Fig. 4 PA and lateral views of the chest five months later show marked volume loss on the left with total consolidation of the entire left upper lobe. A large air-fluid level is seen.

there is a higher incidence of lung cancer in patients with tuberculosis.[1] The higher incidence cannot be adequately explained by age, sex or smoking habits; evaluation of matched populations revealed that over the general population, there was an increased risk of developing lung carcinoma five times more frequently in men and ten times more frequently in women.[2]

The explanation for this increased incidence is not settled. Chronic inflammation and scarring has been suggested to be of great importance in the development of lung carcinoma in tuberculosis patients.[3] A topographic study, however, showed no preferential localization of carcinoma in the area of lung involved with tuberculosis[4] and most pathologic reviews have shown no influence of tuberculosis on the cell types of bronchogenic carcinoma that occur.[1, 5] Most reviews agree, however, that carcinoma can cause reactivation of tuberculosis probably through erosion of the encapsulated caseous foci or patient debilitation.[4]

A noncontroversial finding is that the diagnosis of carcinoma is often delayed in the presence of tuberculosis.[6] There are many reasons for this diagnostic delay. Symptoms such as cough, hemoptysis and weight loss occur in both. Failure to consider cancer is common once the diagnosis of tuberculosis is made and both occur in similar (upper) lung zones. In one study of 43 patients, large cavitary lesions occur with about equal frequency in both groups and "coin lesions" (3 cm diameter or less) occurred with about equal frequency (7.0% vs. 7.3%).[6]

A review of the literature shows that there is a delay in initiating investigation for underlying lung cancer in patients admitted with tuberculosis (13 months in one study).[7] Consequently, patients with subsequent diagnosis of carcinoma usually have very low resectability rates. To determine if carcinoma is present, cytologic screening may be helpful. In a study of 800 men with tuberculosis and who were aged 40 years or over, positive cytology was found in 57 (10%) of those who provided satisfactory sputum and cancer was present in 50 of whom 25 had no evidence of malignancy on chest film.[8] Other clues to carcinoma such as hoarseness, pleural effusion, and physical signs of an endobronchial lesion unfortunately often appear when the carcinoma is unresectable.

Helpful radiographic clues to coexistent carcinoma include progression of the pulmonary infiltrate while the patient is on antituberculous drugs, unilateral hilar enlargement, development of asymetric increased pleural densities while on therapy, solitary nodules greater than 3 cm, or the character of the cavity. (Often a smooth inner margin and contour of the cavity wall suggests tuberculosis while an irregular wall and contour suggests malignancy).[9]

The most important factor is for the physician to remember that a positive sputum smear for tuberculosis does not rule out concurrent malignancy, especially in a patient who has disease that is drug resistant or has the radiographic features mentioned above. An aggressive approach (repeat sputum cytologies, bronchoscopy) is important. One group advocates thoracotomy after a limit of three to four weeks investigation to eliminate delay and, hopefully, increase the number of curative resections.[1]

Summary

Our patient provided early diagnostic clues for the presence of tuberculosis and cancer. The continued radiographic evolution of these diseases, despite antituberculous therapy, typifies the difficulties of establishing a complete and timely diagnosis even with an aggressive diagnostic approach. After institution of radiation therapy, the left lung reexpanded except for the cavitated and fibrosed left upper lobe.

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An international assemblage of physicians and medical educators is expected for the World Medical Association's Continuing Medical Education Meeting in Honolulu on October 11-14. The meeting, to be held in conjunction with the annual scientific meeting of the Hawaii Medical Association, offers a total of 19 hours of Category 1 CME credit. A special feature will be the presentation of live clinics at various hospitals and the use of Video Clinics produced by the AMA. The World Medical Association registration fee is $50. For information, contact World Medical Association, North American Region, 563 N. State St., Chicago, IL 60610.

Q. MICHAEL DITMORE, M.D., CLARK WATTS, M.D.
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Extracranial-Intracranial Bypass

A Review

THE EXTRACRANIAL TO INTRACRANIAL (EC-IC) ARTERIAL BYPASS was first developed in the laboratory animal more than ten years ago.[1] Since then, numerous reports have shown the technique used for the prevention and treatment of stroke to be feasible in the human patient.[2-9] These reports, however, have been nonrandomized and noncontrolled in a population of patients who have multiple causes, different clinical presentations and unpredictable outcomes, with medical or surgical therapies.

To define the role of the EC-IC arterial bypass more clearly, Barnett *et al* initiated a carefully randomized and controlled study in 1977.[10] This study was designed to delineate the efficacy and safety of the EC-IC arterial bypass for the prevention of stroke in patients with lesions not accessible by other standard surgical techniques, such as carotid endarterectomy, and to compare the bypass to current best medical therapy.

This ongoing study includes patients with transient ischemic attacks (TIA), reversible ischemic neurologic deficits (RIND) or partial nonprogressive stroke (PNS) who have a lesion such as an internal carotid artery occlusion, middle cerebral artery occlusion or stenosis, or internal carotid artery stenosis not accessible by surgery and with symptoms appropriate to that lesion. This multicenter international cooperative study is nearing the needed 1,000 patients, who will be observed for five years. While this study is being completed, we are left with the previously mentioned case series reports to help us identify those patients who are most likely to benefit from the EC-IC arterial bypass.

THEORY OF ARTERIAL BYPASS

Stroke is the third leading cause of death and the leading cause of disability in the United States.[11] Emphasis, therefore, should be placed on prevention of stroke. One of the major risk factors that forewarns of stroke is TIA.[12] To prevent stroke, we therefore, must identify those patients at risk so that appropriate preventive therapy can be initiated.

One accepted form of preventive therapy is carotid endarterectomy. In selecting patients for this form of therapy, at least 10% have lesions appropriate to their symptoms that are not surgically accessible by carotid endarterectomy.[13] These lesions include internal carotid artery occlusion, stenosis of the internal carotid artery in the osseous or intracranial portions, middle cerebral artery stenosis and occlusions. In these patients, construction of an arterial bypass from the extracranial circulation (usually the superficial temporal artery) to the intracranial circulation in the distribution of the middle cerebral artery augments flow distal to a symptomatic lesion (Fig. 1). In acute arterial bypasses, this augmentation is in the range of 15% to 20% of the normal 120-170 mls/minute middle cerebral artery flow.[14] In chronic arterial bypasses, the augmentation of cerebral blood flow is more dramatic (Fig. 2).

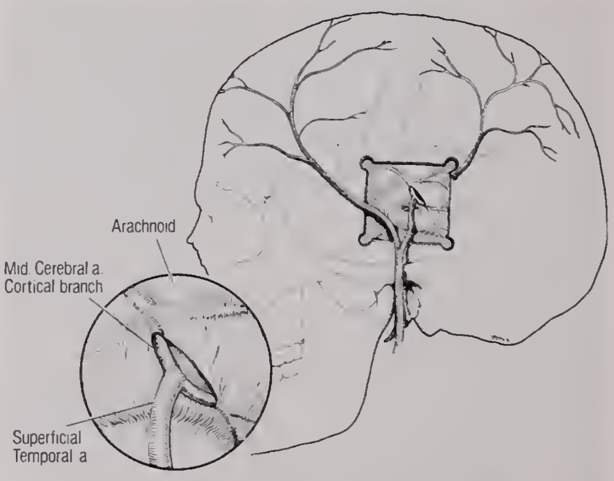

Fig. 1 Posterior branch of superficial temporal artery anastomosed to temporal branch of middle cerebral artery.

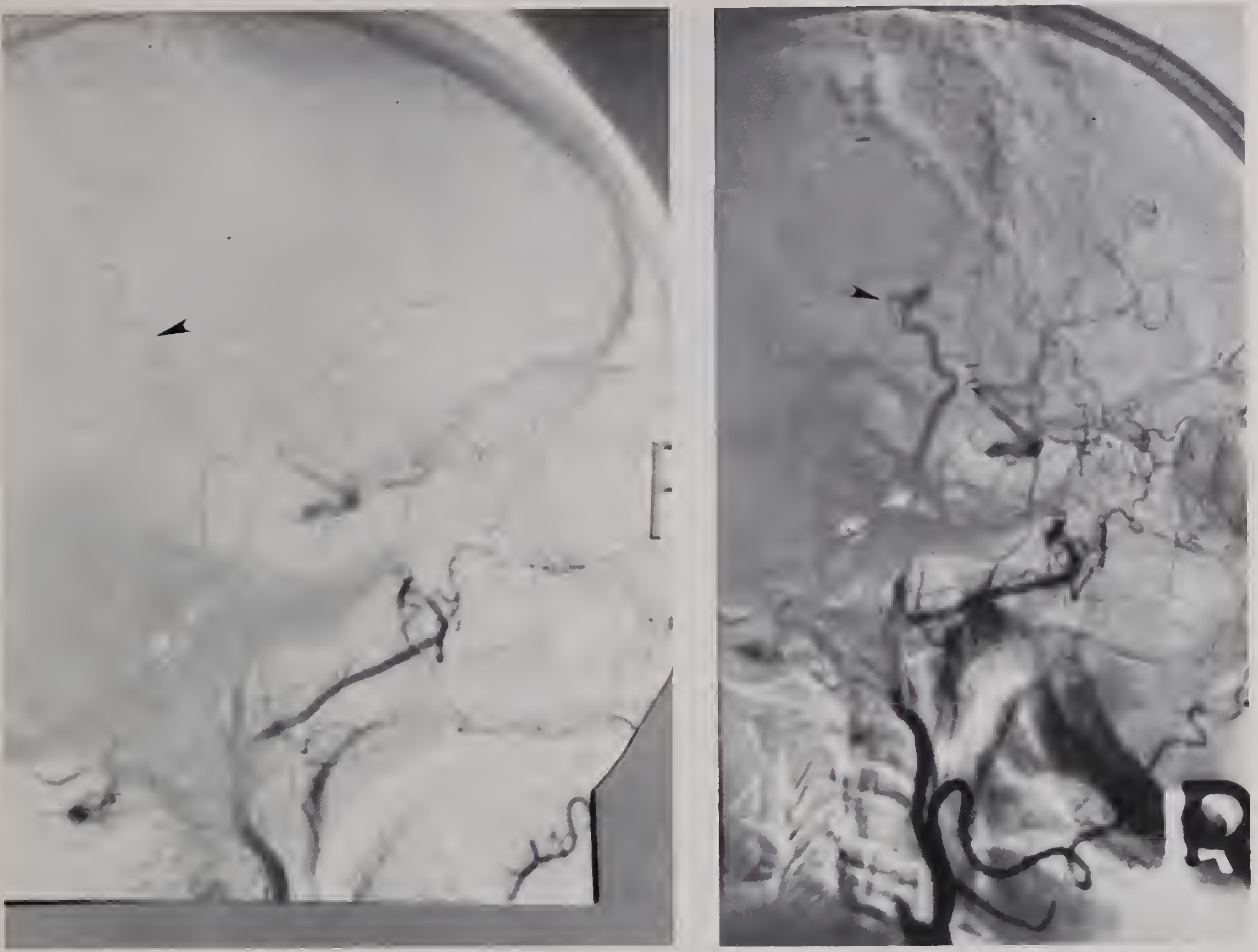

Fig. 2 Arteriogram before *(left)* and after *(right)* EC-IC arterial bypass. Large arrow *(A)* posterior branch superficial temporal artery. Large arrow *(B)* at point of anastomosis. Small arrow *(B)* point of sacrifice of anterior branch of superficial temporal artery.

Technical Considerations

Obviously, the procedure requires the presence of an adequate donor and recipient artery. Patency rates with arteries 1 mm or larger have consistently been in the 90% range,[2, 3, 5-7, 9] but they fall precipitously when vessels of smaller diameter are used. Fortunately, the superficial temporal artery (STA) is normally larger than 1 mm (usually 1.2-1.6 mm). Recipient cortical vessels exiting the Sylvian fissure can be isolated measuring 1.2 mm.

In those instances in which no donor vessel is readily available, interposition grafts have been used. Vein interpositions from the bifurcation of the superficial temporal artery (personal experience), occipital artery (Fig. 3), common or external carotid[15-17] and even subclavian to recipient cortical vessel[18] have been attempted with success. The use of free radial artery[19] or synthetic materials[20] as small vessel substitutes in these instances has been reported but has not enjoyed wide acceptance because of technical difficulties and/or an increased incidence of late occlusions. Availability of biologic substitutes such as a glutaraldehyde-treated umbilical artery may resolve some of these problems, but they await further laboratory evaluation.

Indications

The EC-IC arterial bypass can be and has been used for both the treatment and prevention of cerebral ischemia.

As a treatment of completed stroke or of stroke-in-evolution,[2, 3, 5, 7, 9] the procedure has received mixed reviews in the reported series. Attempts to define the benefit of the bypass vs the expected improvement over time in completed stroke patients have not been rewarding. For the augmentation of blood flow to have benefit in these instances would require the presence of

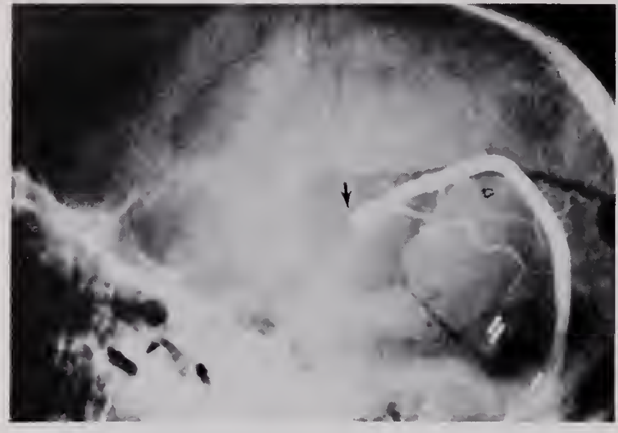

Fig. 3 Arteriogram shows patent vein interposition graft from occipital artery to angular branch middle cerebral artery. Arrow is at point of anastomosis.

reversible neuronal ischemia in or around an area of infarction — a conceptualization not borne out in the laboratory or in practice.[21-24] Those patients with stroke-in-evolution or progressive stroke who have undergone the bypass procedure have shown little improvement from the natural history of stroke-in-evolution. Those patients also account for the highest rate of morbidity and mortality.[2, 3, 5, 7, 9]

The indications for the EC-IC arterial bypass as a prophylactic measure are somewhat more clearly established. Patients presenting with TIA, RIND or PNS and appropriate lesions undergoing EC-IC bypass would appear to receive significant benefit from the procedure compared to the expected natural history. The stroke rate of 3% to 4% in those patients undergoing bypass[2, 3, 5-7, 9] is clearly less than the 15% or greater stroke rate one would expect in nonbypassed patients.[25]

In nonischemic cerebrovascular problems (for example, giant aneurysms, nonaccessible internal carotid artery trauma, tumor involvement of the internal carotid artery, middle cerebral artery, etc., where temporary or permanent occlusion is required for treatment), the bypass has been used with success.[26-29] While debate continues about whether to allow time for the bypass to "mature" before this occlusion,[30] the question is generally answered by the urgency of the particular problem under treatment. For example, in a high cervical carotid traumatic lesion for which treatment might require sacrifice or prolonged occlusion of the internal carotid artery, one is not given the luxury of elective bypass followed by elective investigation of the internal carotid artery lesion.[31]

Mention should be made of the unusual patient with vertebral basilar insufficiency secondary to vertebral artery stenosis or occlusion.[32, 33] Occipital artery to various branches of the vertebral or basilar artery have been performed in these patients with technical success, but efficacy of these arterial bypasses has yet to be established.

MORBIDITY AND MORTALITY

Samson and Boone[14] reviewed the current literature on the EC-IC arterial bypass in 1978. In this review, they found the overall operative mortality rate slightly higher than 3%. They point out that the highest morbidity and mortality figures were seen in patients with acute or progressive ischemic neurological deficits. Death in approximately half of these patients resulted from ischemic cerebral vascular accident while other postoperative complications accounted for the other half.

They found that 10% of patients undergoing EC-IC bypass had significant operative morbidity. Morbidity was defined as an adverse effect on the patient's neurological condition, general state of health, required additional therapy or prolonged hospital stay. It must be remembered that this figure includes patients with stroke-in-evolution or completed stroke for whom we no longer offer the operation.

SUMMARY

The extracranial to intracranial arterial bypass has been shown to be a technically feasible operation with a high patency rate in the hands of skilled microvascular neurosurgeons. The operation has significant but acceptable mortality and morbidity rates when compared with the natural history of the untreated disease.

In this article, the authors review the theory, technical considerations, indications and complications of extracranial to intracranial arterial bypass. The procedure is still under investigation but would presently be indicated for patients who have transient or partial stroke with arterial lesions not accessible to standard carotid endarterectomy.

Dr. Ditmore is Assistant Professor, Dr. Watts is Professor and Chief and Dr. Scharf is a Fellow (Microvascular Laboratory), Division of Neurological Surgery, University of Missouri-Columbia Health Sciences Center.

The operation appears to be of benefit in the prevention of stroke in those patients with transient ischemic attacks, reversible ischemic neurological deficits or partial nonprogressive stroke who have surgically inaccessible lesions of the internal carotid or middle cerebral arteries appropriate to their symptoms. Additionally, the bypass is indicated in those patients in whom sacrifice of major arterial supply to the brain is required for the treatment of nonarteriosclerotic lesions of these arteries. At present, there is no clear indication for the bypass in the patient with completed stroke or in patients with stroke-in-evolution.

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Of the professions, it may be said that soldiers are becoming too popular, parsons too lazy, physicians too mercenary, and lawyers too powerful.
—C. C. Cotton:
"Lacon," 1820

JAMES K. WALSH, Ph.D., GEORGE A. ULETT, M.D., Ph.D. *and*
JAMES O'REGAN, M.D., *St. Louis*

Nocturnal Penile Tumescence Monitoring

Importance for the Differential Diagnosis of Erectile Impotence

DETERMINING WHETHER erectile impotence has an organic or psychogenic etiology is frequently difficult for the clinician. Typically, psychological factors have been believed to determine the vast majority of impotence complaints.[1] However, the number of physiological conditions documented to be associated with impotence is extensive.[2] A partial list of organic conditions that can be related to impotence is displayed in Table 1. The considerable number of related organic dysfunctions, along with the development of new treatment strategies for both psychogenic[3] and organic[4, 5] impotence, makes differential diagnosis increasingly important. The measurement of nocturnal penile tumescence (NPT), when performed properly and in conjunction with a thorough clinical evaluation, can contribute substantially to the differentiation of psychogenic and organic impotence in many cases.

Although NPT had been described as early as 1940,[6, 7] systematic descriptions of the phenomenon began more than 20 years later.[8, 9] These studies and subsequent research[10] demonstrated that all normal males between the ages of 2 and 80 years have NPT during or in temporal proximity to most rapid eye movement (REM) sleep periods. The characteristics of these NPT episodes vary with age.[10] Presumably, the physiology of NPT is identical to that of erections during wakefulness. Therefore, organic conditions affecting waking erectile capacity are assumed to equally affect NPT, whereas, psychogenic etiologies would be accompanied by normal NPT patterns.

A patient displaying normal NPT during the evaluation should be directed to a professional specializing in sexual therapy. Masters and Johnson[3] have pioneered the use of behavioral strategies in the treatment of sexual dysfunction and report successful treatment in the majority of cases. Because of their efforts, behavioral techniques have essentially replaced analytical treatment strategies for psychogenic impotence.

Abnormal results from an NPT evaluation should initiate the search for a specific organic etiology, if it is unknown. Impotence secondary to hypothalamic-pituitary-gonadal dysfunctions may be reversible with appropriate endocrine therapy.[11] Insufficient blood supply to the cavernous bodies may be correctable by recently developed surgical procedures.[5] Patients with impotence secondary to nonreversible organic conditions, such as autonomic neuropathy from diabetes mellitus or multiple sclerosis, may be candidates for implantation of a penile prosthetic device.[4]

Monitoring of NPT provides the first objective measure of erectile capacity to assist in making the often difficult distinction of psychogenic vs organic impotence.[12] The standard methodology

TABLE 1
SOME ORGANIC CAUSES OF IMPOTENCE

Cardiovascular
Hypertension
Myocardial infarction
Rheumatic fever
Atherosclerosis

Endocrine
Acromegaly
Diabetes mellitus
Hyperthyroidism
Hypogonadism
Myxedema
Obesity
Hyperprolactinemia

Genitourinary
Gonorrhea
Mumps
Peyronie's disease
Renal disease

Medications
Antihypertensives such as:
  Alpha methyl dopa, guanethedine, clonidine, etc.
Disulfiram
Carbamezapine
Estrogens
Tricyclics
Phenothiazines
Agents which increase prolactin

Hematological
Hodgkin's disease
Leukemia
Sickle-cell anemia

Neural
Epilepsy
Hypothalamic tumor
Multiple sclerosis
Parkinsonism
Peripheral neuropathy
Pituitary tumor
Spinal cord syphilis
Temporal lobe lesion

Respiratory
Emphysema
Pulmonary insufficiency

In this article, the authors describe one of the uses of polysomnography in the investigation of sleep-related disorders at Deaconess Hospital.

Dr. Walsh is Director of the Sleep Disorders Center; Dr. Ulett is Director of the Department of Neurology and Psychiatry, Director of the Psychosomatic Research Laboratories and Medical Director of the Sleep Disorders Center; and Dr. O'Regan is Chief of Medicine and Director of Medical Education at Deaconess Hospital. Dr. Ulett also is Clinical Professor of Psychiatry and Dr. O'Regan is Assistant Professor of Medicine at St. Louis University School of Medicine.

for NPT evaluation is reviewed below and the potential inaccuracy of home NPT monitoring is discussed.

NPT Evaluation Procedure

NPT evaluation should be considered for every patient for whom usual clinical methods fail to distinguish between psychogenic and organic impotence. It is best performed on three consecutive nights in a sleep laboratory or other facility equipped to provide quantitative information of sleep structure as well as NPT variables. During this three-day period, the patient should refrain from drinking alcohol, taking nonessential medications and napping during the day. These restraints help assure normal sleep and minimize the invalidation of NPT measurements resulting from disrupted sleep.

Measurement

On each evaluation night, a polysomnographic recording is made to assess NPT and sleep. The parameters monitored include the electroencephalogram (EEG), electro-oculogram (EOG) and submental electromyogram (EMG) to classify sleep stages. Penile circumference changes are measured using two mercury-filled strain gauges placed around the penis. One gauge is placed around the base of the penis. The second gauge is placed just behind the glans. Changes in penile circumference at both the base and tip are reflected on the polysomnographic tracing by deviation of the pens from baseline. The polygraph is calibrated so that pen excursion in millimeters can be accurately translated into penile circumference change in millimeters.

Each of the three recording nights serves a specific purpose. On night one, the patient becomes acclimated to the laboratory and recording methods. The unusual setting and procedures can result in uncharacteristic sleep[13] and NPT[14] on the first night in some individuals. Therefore, data from the first night may be unrepresentative. On the second recording night, the basic data of NPT are collected during uninterrupted sleep. On night three, additional measurements are included which involve awakening the patient during at least one NPT episode. These measurements include patient and technicial ratings, penile rigidity measurement and a photograph.

Using the NPT data of nights one and two as a guide, the patient is awakened during a maximal NPT episode on the third night. A photograph of the penis is taken for documentation and, at that time, the patient rates the erection on a scale of 1% to 100% of his maximal erection. Penile rigidity is measured using a device which is pressed down on the glans until the penis begins to bend. The amount of pressure required to bend the penis is termed the buckling pressure and is measured with an adapted syringe as a pressure transducer connected to a sphygmomanometer. The technician also rates the erection on a scale of 1% to 100% after measuring the rigidity.

Interpretation

The recording and scoring of sleep stages is crucial to NPT evaluation. Sleep must be within normal limits for duration, staging, and continuity in order to make a valid NPT interpretation. Insufficient REM time and/or fragmented REM periods can alter NPT data. Therefore, abnormalities in NPT must be judged to be independent of sleep characteristics in order to conclude that an organic dysfunction is present.

Once it has been determined that a patient's sleep patterns allow a valid interpretation of NPT data, the number, magnitude, duration and consolidation of NPT episodes are determined for each recording night. These values are then compared to normative values of age-matched normal males.[2, 10]

Penile circumference increases at the tip of at least 16 mm are required to be classified as a functional erection in 90% of male adults. Base circumference changes should be 50% to 300% larger than those at the tip. Abnormally disparate circumference changes at one site relative to the other may indicate a structural abnormality or disease state. In 10% of male adults, maximal circumference change may be unusually large or small and does not accurately reflect rigidity. Therefore, circumference change data alone are not sufficient to determine if erectile capacity is normal in all men.

To supplement penile circumference measurements, buckling pressure is determined during a maximal erection. If a force of 100 mm Hg or more is required to bend the penis, the rigidity is probably sufficient for vaginal penetration. Further, rigidity testing allows the examiner to feel the erection and provides further information of its quality. The patient's rating of NPT quality provides information about the patient's perception and report of his performance.

Inadequacies of Home NPT Monitoring

Home monitoring of NPT has become possible with the recent manufacture of devices designed for this purpose. Unfortunately, there are several shortcomings associated with this technique as typically implemented.

As mentioned above, sleep and/or NPT seem to be altered by novel situations.[13, 14] Therefore, the usual practice of NPT recording at home during a single night may result in spurious findings. Further, placement of strain gauges and calibration of the equipment are not observed or supervised.

Without polygraphically monitored sleep, it is impossible to determine if the patient obtained enough sleep with sufficient REM sleep time in consolidated periods. Therefore, decreased or absent NPT may be reflective of disturbed sleep or lack of sufficient REM rather than an organic process contributing to impotency. Many medications, alcohol, daytime napping and other factors can potentially disturb sleep and influence NPT.

Perhaps the most important limitation of home monitoring is the lack of direct obervation of a maximal NPT episode. Penile circumference changes without observation and/or rigidity measurements are *not* sufficient to determine if an erection is sufficient for vaginal penetration. For a small, but significant, percentage of men (probably 10% or less) penile circumference changes are not an accurate reflection of erection quality. Thus, a definitive statement concerning normalcy of NPT requires direct observation of a maximal erection.

Summary

Monitoring of NPT, when performed in conjunction with a thorough medical evaluation, can be helpful in distinguishing psychogenic and organic etiologies of erectile impotence. The advances in treatment strategies for both psychogenic and organic impotence make this distinction more important in recent years. Simultaneous recordings of sleep patterns and direct observation of maximal tumescence are crucial for interpretation on NPT data. For these reasons, home monitoring of NPT is subject to error and laboratory NPT evaluations are preferred.

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> Those who swoon often, and without apparent cause, will die suddenly. A brusque answer from a courteous patient is a bad sign. Labored sleep in any disease is a bad sign.
>
> —Hippocrates:
> "Aphorisms," C. 400 BC

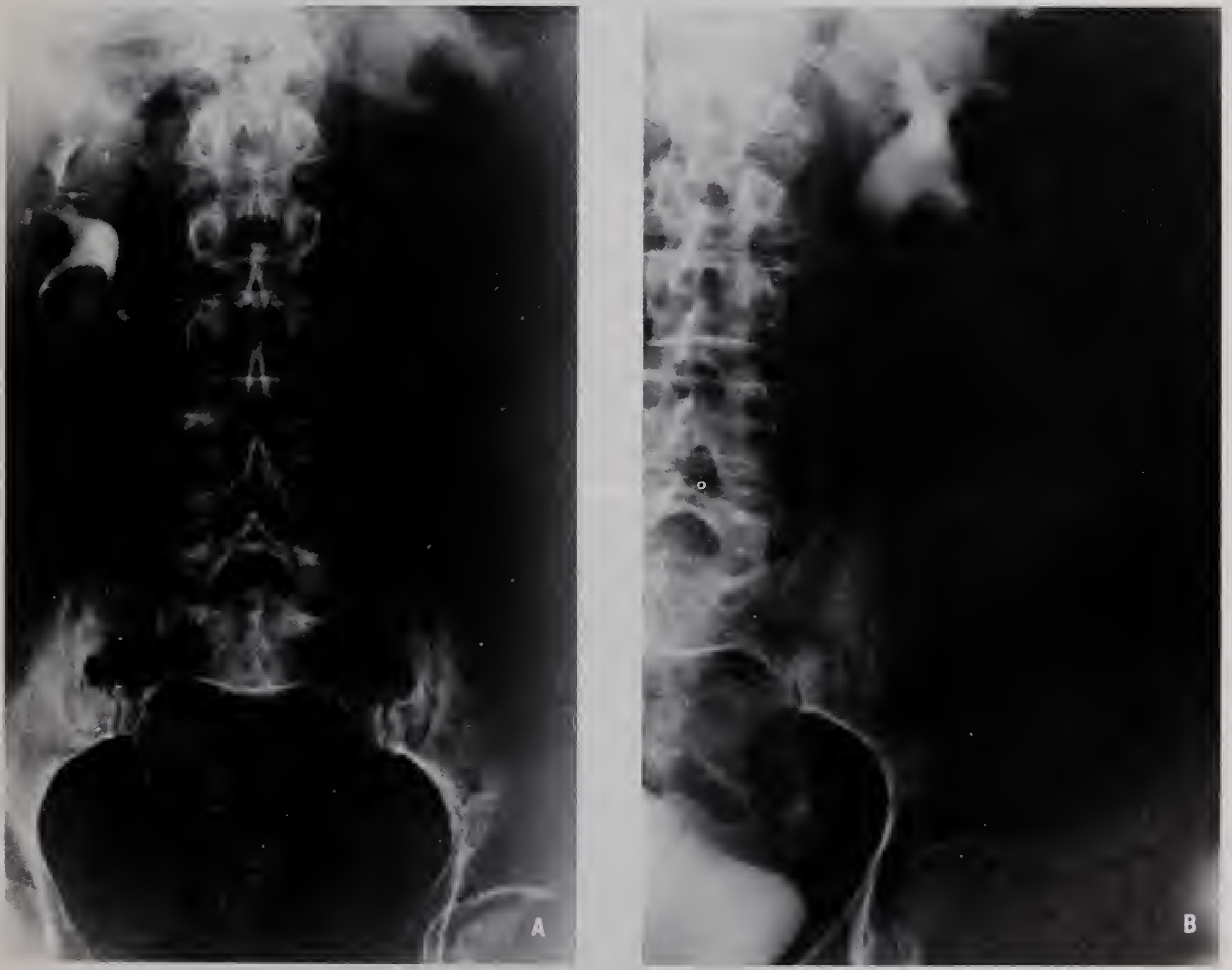
GORDON T. MATSUDA, M.D., *Rolla*

Percutaneous Nephrostomy

Case Reports

ANTEGRADE PYELOGRAPHY as a useful modality in urographic evaluation was first described in 1954 by Wickbom.[1] The clinical application of this antegrade approach was then described by Goodwin and associates in 1955.[2] Percutaneous nephrostomy (PCN) was the result of these first reports and has since established itself as a truly effective diagnostic, temporizing and often therapeutic means of dealing with supra-vesical urinary obstruction of various etiologies. It is a safe, simple and reliable procedure which usually can be accomplished with only a local anesthetic in a facility capable of conventional radiographic studies.

The fact that a general anesthetic and a formal open urological procedure can be obviated or delayed until the clinical situation improves or stabilizes can be a lifesaving result of this procedure. It requires personnel aware of its indications and capable of dealing with the uncommon failed attempts or complications. A more detailed discussion can be found in the listed references.[2-7]



Figs. 1A & 1B Obstruction of and extravasation from distal left ureter.

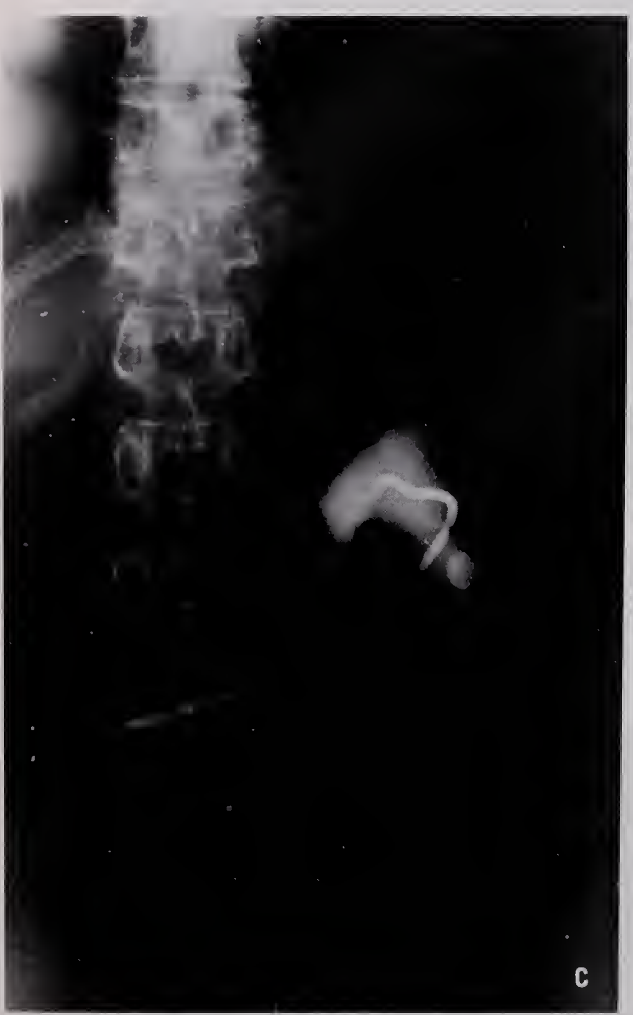


Fig. 1C Nephrostogram per percutaneous nephrostomy tube.

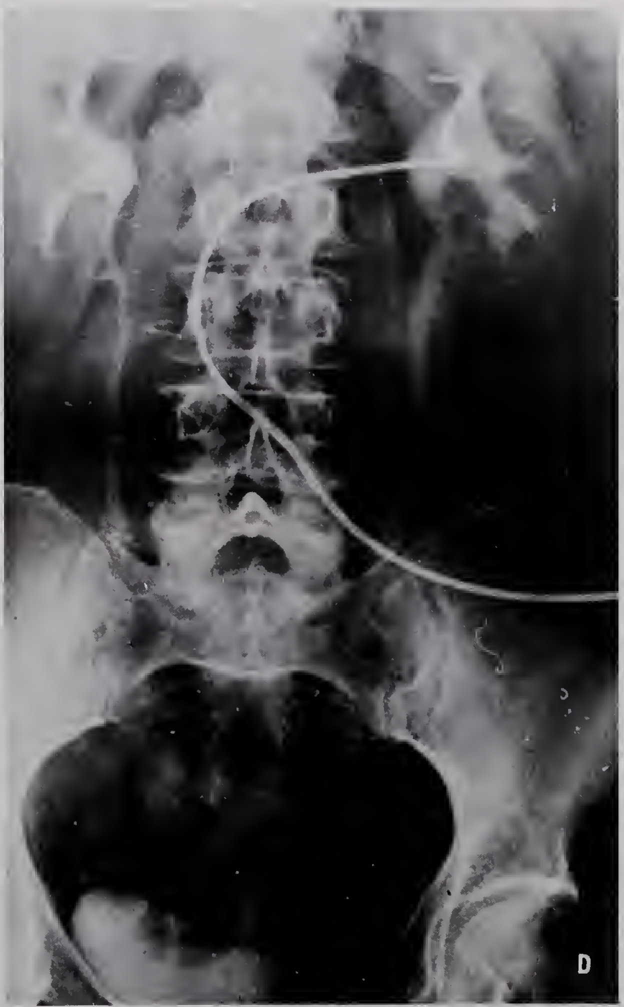


Fig. 1D Excretory urogram (IVP) prior to removal of percutaneous nephrostomy.

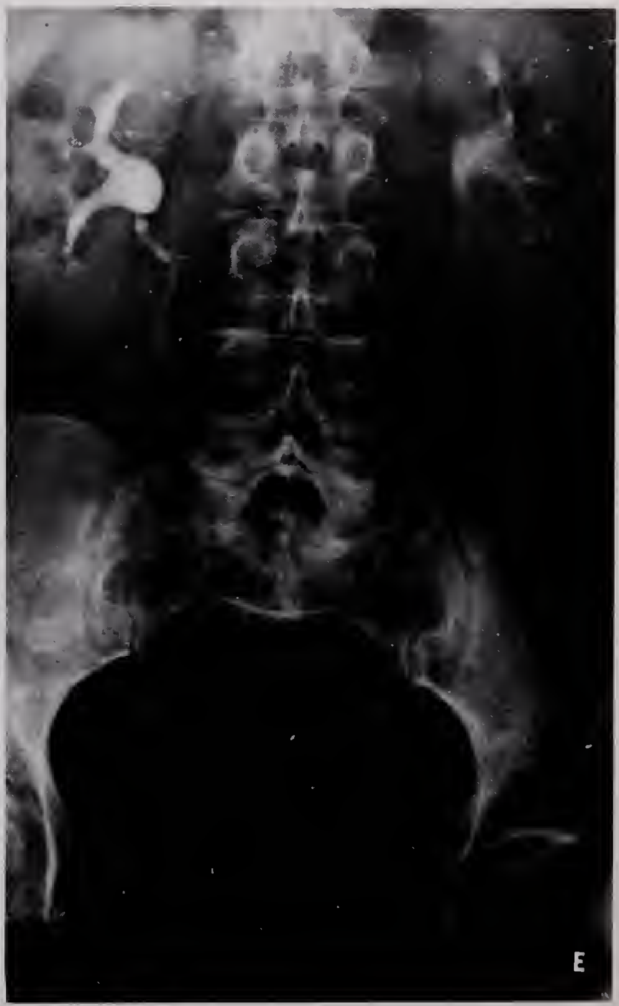


Fig. 1E Follow-up excretory urogram.

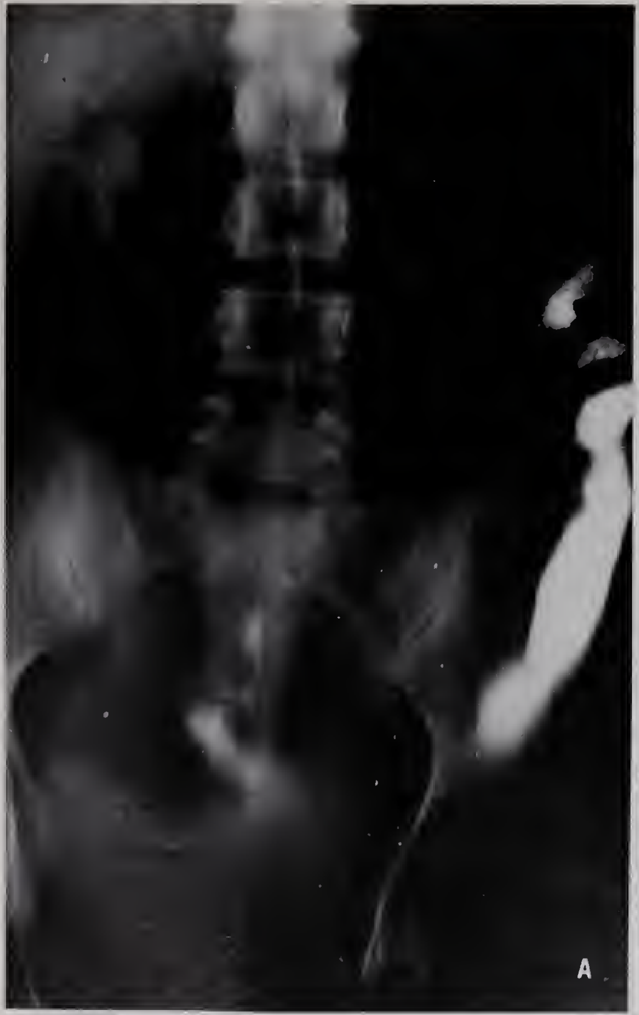
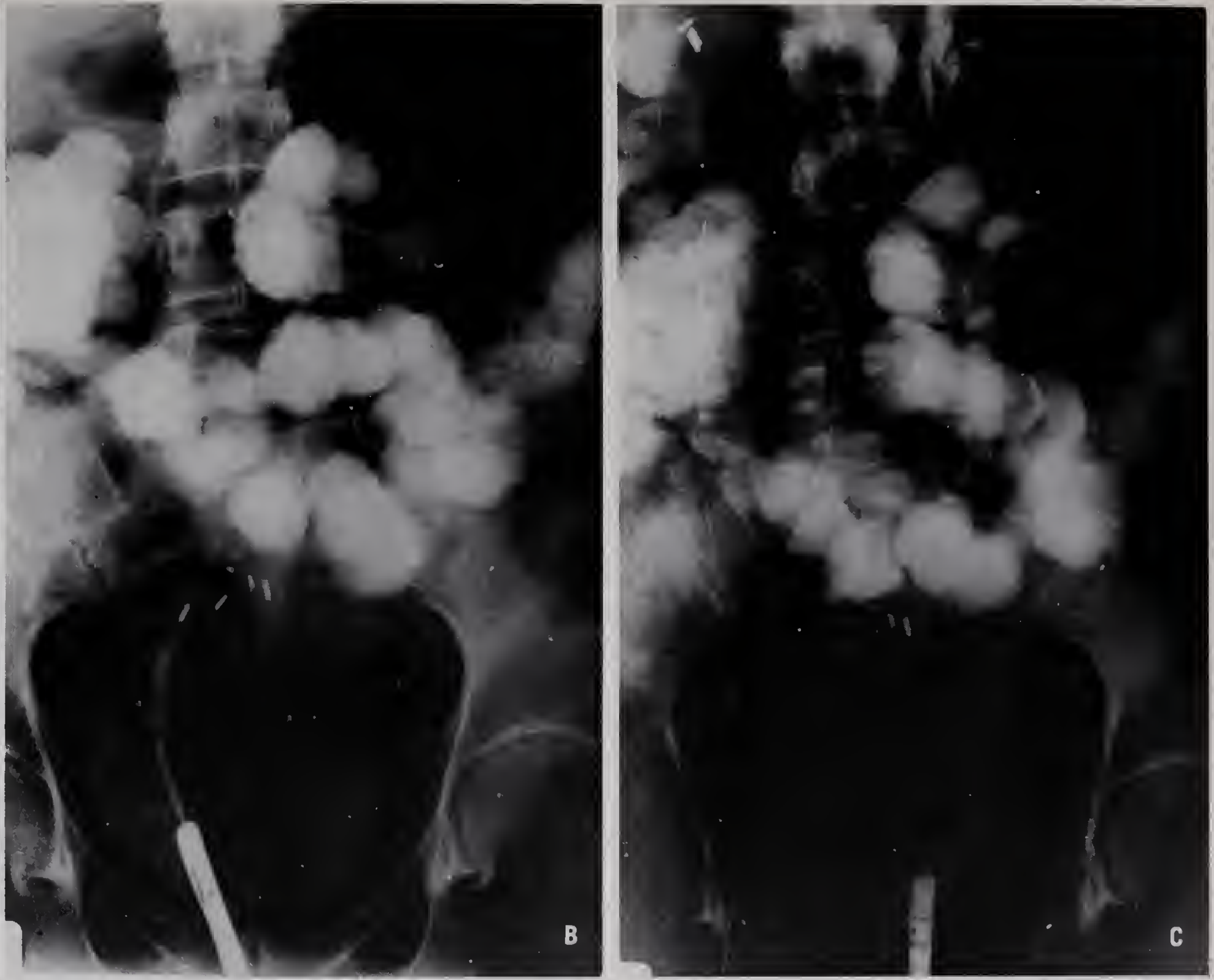


Fig. 2A Delayed film on excretory urogram (IVP) consistent with bilateral ureteral obstruction.



Figs. 2B & 2C Retrograde pyelograms and ureteral catheters in place (catheter could not be passed beyond mid-left ureter).

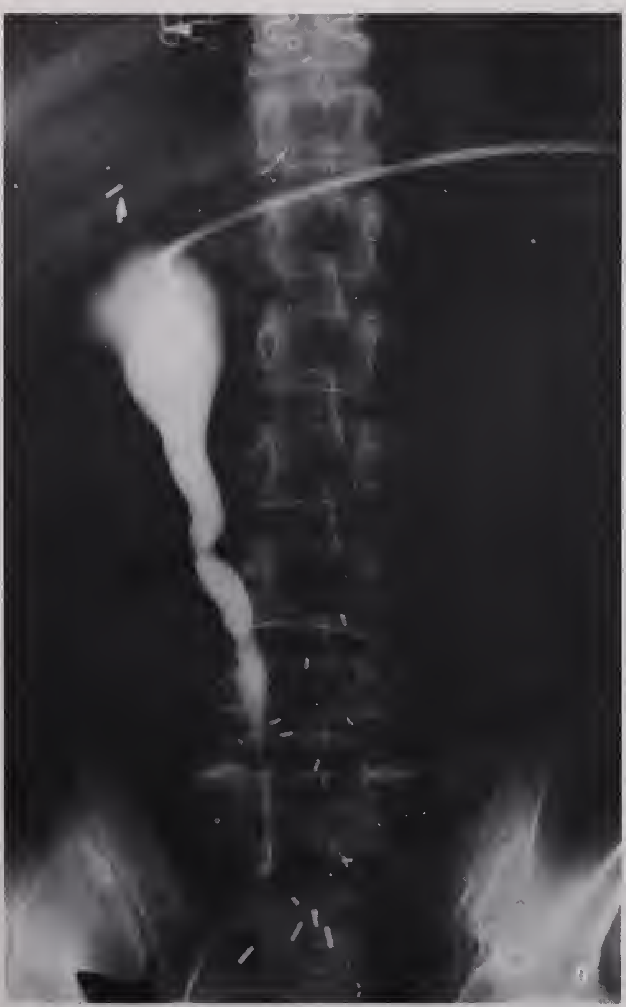


Fig. 2D Percutaneous nephrostomy in right renal pelvis.

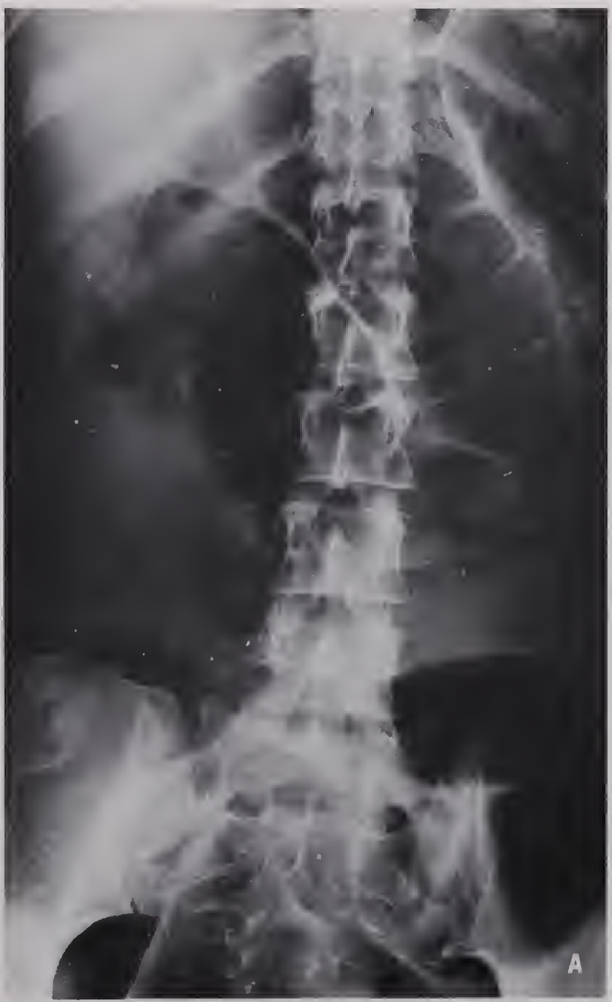


Fig. 3A Severe obstruction on right side on excretory urogram (IVP).

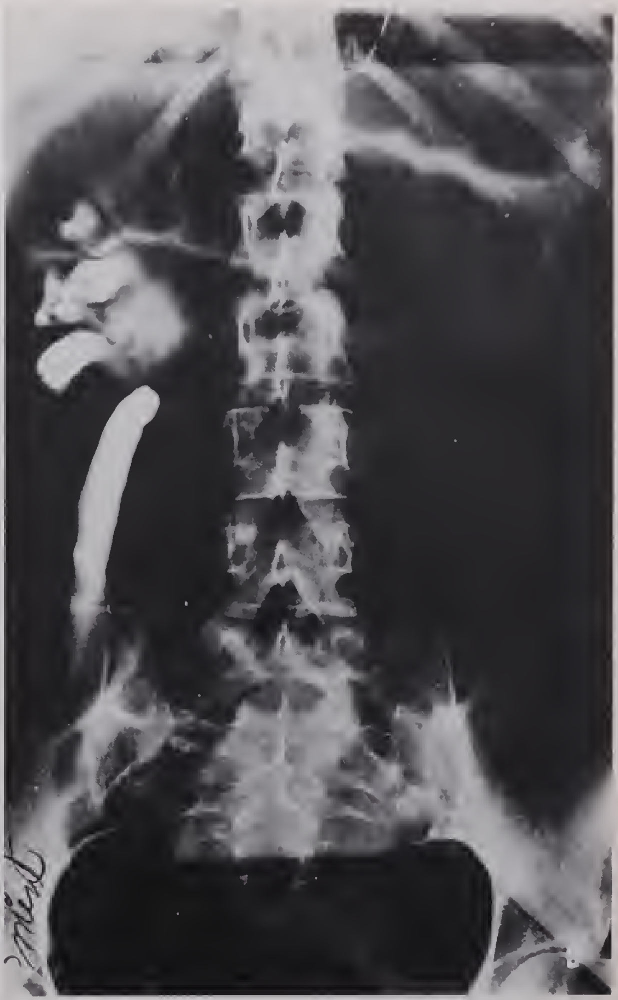


Fig. 3B Bulb retrograde pyelogram.

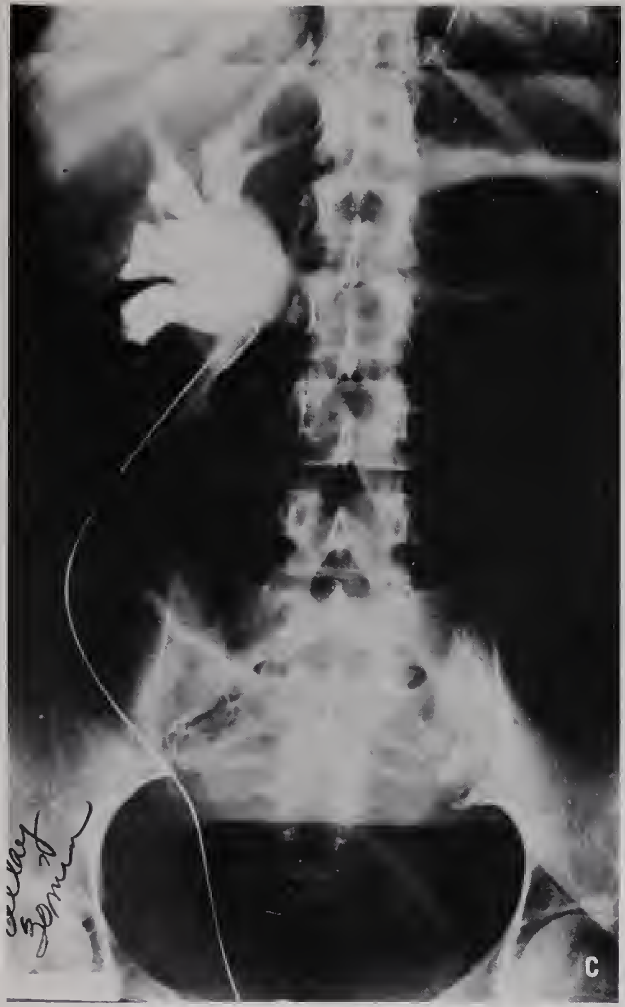


Fig. 3C Catheter or flexible, tipped guide wire could not be passed into renal pelvis.

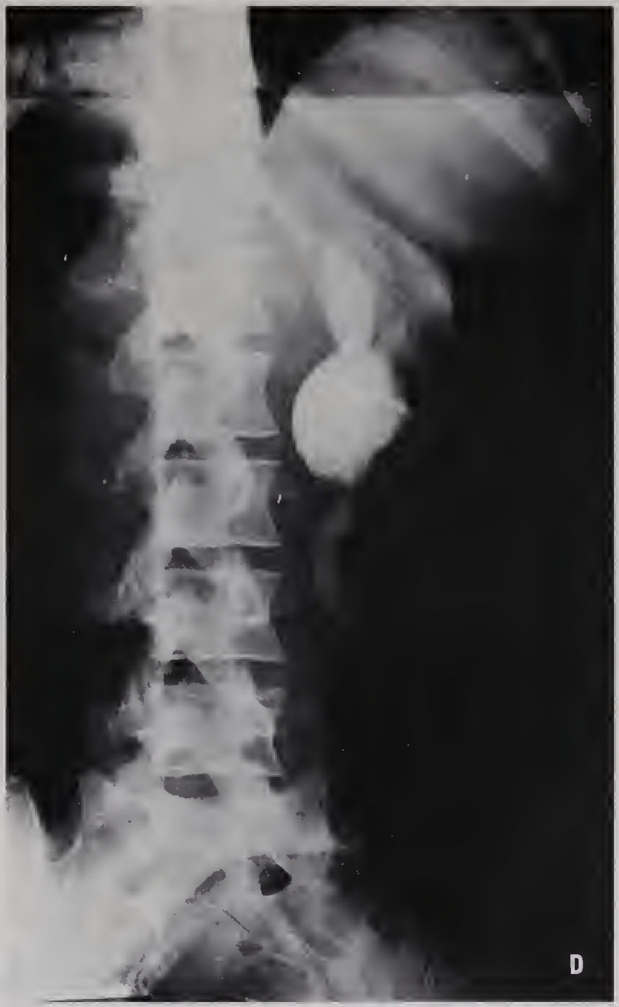


Fig. 3D Percutaneous Nephrostomy.

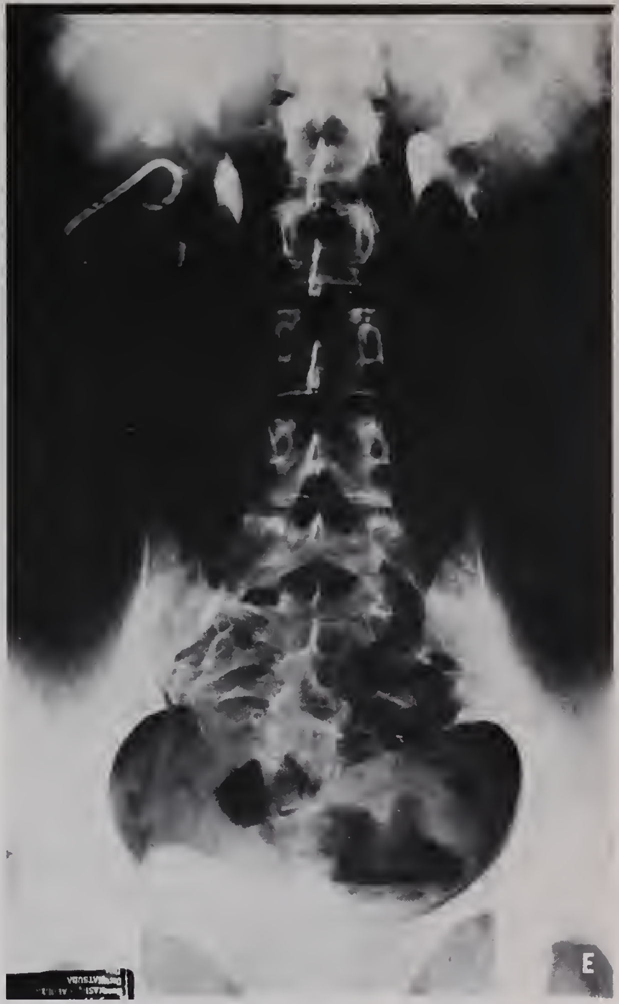


Fig. 3E Excretory urogram (IVP) prior to removal of percutaneous nephrostomy.

METHOD

The procedure and its subsequent modifications have been well described in the literature. The basic principles involve visualizing the upper collecting system with fluoroscopy and/or ultrasound with the patient in a prone or near prone position. Entry into the obstructed pelvocalyceal system is gained with any of the various needle types. A guide wire is then passed into the above needle and into the collecting system, the needle is removed and the "tract" is dilated over the guide wire. The drainage catheter is then placed and the guide wire removed. The entire procedure is facilitated by commercially available "kits" that also facilitate the changing or the exchanging of the drainage catheter to one of a larger size.

CASE REPORTS

Case #1 A 64-year-old woman had unsuccessful basket manipulation of a distal left ureteral stone on two separate occasions. The second attempt was immediately followed by a successful (open) ureterolithotomy and the patient was discharged from the hospital and received cephalexin postoperatively. Fever, flank pain, nausea and vomiting developed 18 days postoperatively and the patient was referred. An excretory urogram (intravenous pyelogram [IVP]) demonstrated obstruction of and extravasation from the distal left ureter (Fig. 1 A & B). She received maximal doses of gentamicin. An attempt to pass a ureteral catheter was not successful. This retrograde approach was attempted with only a local anesthetic because of the precarious condition of the patient; and importantly, this failure was due to the diseased ureter or to a technical failure and not due to patient discomfort.

Septic shock ensued, the patient was stabilized, and a PCN was placed successfully. Her subsequent course was one of rapid improvement and a nephrostogram in two weeks demonstrated contrast media in the bladder (Fig. 1C). Twenty-five days after the PCN, the patient's urine output per the PCN catheter diminished and then ceased. An excretory urogram showed no delay, obstruction or extravasation and the PCN tube was removed (Fig. 1D). She remained completely asymptomatic while not receiving antibiotics and a follow-up excretory urogram was also unremarkable (Fig. 1E).

Case #2 A 50-year-old woman had a sigmoid colon resection for a Duke's C 2 adenocarcinoma. She did well for a year, but then developed increasing difficulties with nausea, vomiting, obstipation and weakness that required her hospitalization.

An evaluation demonstrated a local recurrence and a serum creatinine value of 8. An excretory urogram (IVP) demonstrated bilateral ureteral obstruction with possible metastasis to the left kidney (Fig. 2A). She was seen in consultation. After a full discussion of her options and expectations, the patient and her family elected urinary diversion and radiation therapy. Retrograde pyelograms confirmed the antegrade and clinical picture (Fig. 2B & C). A ureteral catheter could not be passed on the left side, however, and 4 Fr catheter on the right side provided drainage and gratifying improvement of her uremic symptoms, she was unable to tolerate the bladder discomfort caused by the catheters and the ureteral catheter could not be replaced with an indwelling ureteral stent. A PCN catheter was placed with ease and resolved her uremic symptoms (Fig. 2D). She also responded to the radiation therapy but was eventually lost to follow up.

Percutaneous nephrostomy is a simple and safe method for draining an obstructed upper urinary tract.

Dr. Matsuda is from the Phelps County Regional Medical Center.

Case #3 A 23-year-old gravid woman was hospitalized while in active labor and delivered twins vaginally and uneventfully on the following day. Her urological history was unremarkable except for the fact that she described increasing difficulties from right flank pain, fever, urinary frequency and dysuria during the five days prior to her hospitalization. Results of her admission urinalysis were abnormal and she was given antibiotics for a presumed urinary tract infection.

A bilateral tubal ligation and incidental appendectomy were performed on her first postpartum day. Urological consultation was requested on her first postoperative day because of persistent fever, narcotic requiring right flank pain and a suspected urinary tract infection. An excretory urogram (IVP) demonstrated a severe obstruction on the right side (Fig. 3A). At the time of the cystoscopy, the obstruction was felt to be at the level of the ureteropelvic junction as there appeared to be a high insertion of the ureter on a bulb retrograde pyelogram (Fig. 3B). A catheter in the upper uteter did not result in a hydronephrotic drip or drain the renal pelvis, and a ureteral catheter could not be placed into the renal pelvis (Fig. 3C). In view of the above and the fact that her religious belief precluded blood transfusion and she had a hematocrit value of 28%, a PCN was felt to be the best method of diversion (Fig. 3D). This was performed without difficulty and she was discharged with drainage and without symptoms.

The patient was readmitted six weeks later since her PCN drainage had diminished and then ceased completely. A excretory urogram showed no obstruction (Fig. 3E). She received appropriate antibiotics, and the PCN tube was removed. Her course immediately following the removal of the PCN tube was uneventful, but she failed to return for follow-up.

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(Continued on page 296)

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ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

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DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets. VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

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President's Message

ARE YOU READY?

This is a political year. In November, Missourians will elect a United States Senator, nine members of the United States House of Representatives, all members of the Missouri House of Representatives and one half of the state senators. In addition, there will be many candidates seeking city and county offices in every section of the state.

In 1982, all political campaigns are expensive and the expenses of the major campaigns are awesome. Support the candidates of your choice in the primary election that is coming up in August. Elections are frequently decided in the primary. Are you fully participating in AMPAC? It is an excellent opportunity to develop a "key contact" relationship with a promising political candidate or an established veteran. Early contribution is deeply appreciated by political candidates and long remembered.

Each election sees a significant proportion of eligible voters unable to vote because they are not registered to vote. This problem is greatly magnified by our highly mobile population. Are you and the members of your immediate family registered to vote? Are your associates, their families and the members of your staff properly registered? The emphasis here, of course, is not to influence how these individuals vote, but simply to encourage them in every way possible to vote so that the election can be as representative as possible.

John I. Matthews, M.D.

Truly influential people have studied the system and know how it operates. They make a political selection early, contribute financially well in advance of the primary and, thus, maximize their political clout. They also contribute to MMPAC where physicians' funds are pooled to provide assistance to friends of medicine. Are you ready for August and November of 1982?

MSMA Auxiliary

I believe all who attended the 57th Annual Convention of the MSMA Auxiliary in Kansas City will join me in an expression of our pride and the privilege of belonging to such an organization. First, let me applaud the efficient and smooth manner in which the convention was run under the able leadership of President Mrs. Jerry Meyer (Jan). It reflected her skillful planning as well as her dedication to excellence in all she does. She added another year of progress to the illustrious history of this organization. The convention attendance was up and our auxiliary membership shows an increase over last year. We thank her for this leadership.

Mrs. Sam Gaston
President

Again, the fruits of many labors were obvious by the monies raised for the Missouri State Medical Foundation and AMA-ERF through both county and state projects. Proceeds from this year's fourth Benefit Auction were approximately $8,400.

This total is salient testimony to the real partnership role that the auxiliary plays in medical education and research. The fringe benefit is the added fellowship and spirit of cooperation toward a common goal that gives an added dimension of membership.

Another fruit of Jan's year is the new pamphlet encouraging the use of child-safe auto restraints that were developed in cooperation with the Missouri Division of Health. These attractive pamphlets are available for distribution by contacting Mrs. Robert Edmonds, 1601 W. Broadway, Sedalia, 65301.

This will be a priority thrust in the area of Health Education and Safety for the auxiliary this year. We do appreciate your help in this endeavor.

Each county auxiliary is a composite of many interests and talents. I am amazed each year at the convention as I listen to the county presidents' reports and I marvel at the creative ideas generated by our members. Perhaps daily routines preclude our taking time to properly appreciate the reciprocal roles we play in bringing better health care and knowledge to our communities.

In his address to the House of Delegates on Thursday morning, MSMA President John I. Matthews referred to this role and challenged his colleagues to see that their spouses' dues are paid so that they, too, may join in this mutual cause to the benefit of all. As an added step of involvement, Dr. Matthews appointed me to serve as an ex officio member of the MSMA Committee on Legislative Affairs for 1982-1983. I look forward to serving in this capacity as many interesting legislative issues are forthcoming.

I am very excited about the MSMA Auxiliary year ahead. Many of your spouses have accepted positions of responsibility as state and county leaders. By doing so, they have demonstrated their willingness to "take time to serve others — it is our gift to life."

EDITORIAL

THANK YOU, DR. WOOLDRIDGE!

One cannot let Dr. Wilfred Wooldridge's departure from the editorship of this Journal happen without some editorial comment. To put it simply, he took over a good medical magazine and by his unique abilities made it even better. A skin specialist down in the Ozarks might not at the time have seemed a likely candidate for the position, but someone at the state level knew Dr. Wooldridge's qualifications a few years back and recruited him. Even if his full name appears like a mouthful of Ws, one must add Wit, Wisdom, and Willingness to Work to complete the description. The *Bulletin of the Greene County Medical Society* had already benefited from his several years of leadership. His selection of papers for publication, the addition of special review articles, and the editorials themselves have all given credit to his journalistic abilities in this magazine.

Dr. Wooldridge has many talents. His patients respect him. Those who hear him sing in concert are always the richer for the experience. His paper given at the recent Missouri State Medical Association Convention was a masterpiece.* Only the fish he sets out to catch fear him. All of us continuing on the MISSOURI MEDICINE staff can merely say "Best of luck in all you do" to Dr. Wooldridge.

JORDAN W. BURKEY, M.D., *Editor*

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* Dr. Wooldridge's paper, "The Historical Background of Where American Medicine Is Today and How It Got There," appears on page 258 of this issue.

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MSMA Members Receive Physician's Recognition Award

Forty-two MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of March, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in MISSOURI MEDICINE as they are received from the AMA.

William A. Anderson, Kansas City
Lillard G. Ashley, Kansas City
James W. Bernard, Caruthersville
Alan L. Braun, Jefferson City
Kenneth A. Buchwach, Kansas City
Nazar Chand, Poplar Bluff
Emilio J. Dominguez, Springfield
Roland P. Ernst, St. Louis
Doris C. Weiser Gilpin, St. Louis
Robert L. Givler, Kansas City
Richard M. Halford, St. Louis
Patrick B. Harr, Maryville
Donald E. Heins, St. Joseph
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Ronald T. Hill, Dexter
Barbel Holtmann, St. Louis
Charles J. Johnson, St. Louis
Stephen A. Kamenetzky, St. Louis
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Irene M. Minkoff, Frontenac
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Carl D. Siegel, Kansas City
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Otto M. Spurny, Kansas City
Victor V. Strelzow, St. Louis
Thomas H. Waddell, Kansas City
Norman R. Wall, Springfield
Joseph J. Williams, Clayton
Arlen D. Winsky, Springfield

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
Contact: **William D. Bradshaw, M.D.**

Apr. 22-23	Fifth Annual Primary Pediatrics for the Primary Physicians
May 7-9	Fifth Annual Missouri Cardiovascular Conference (Tan-Tar-A, Lake Ozark)
May 25-26	Fifth Annual Primary Pediatrics for the Primary Physician
June 24-26	Annual Clinical Conference on Arthritis
Aug. 7-8	Fifth Annual Soft Tissue Surgery Workshop
Sept. 24-26	Fall meeting — Missouri Ear, Nose and Throat Society (Lodge of the Four Seasons)
Oct. 7-8	Fourth Annual Missouri Perinatal Association Meeting
Oct. 14-16	Fourth Annual Autumn Rheumatology Symposium

Missouri Chapter, American College of Surgeons, Inc.
P.O. Box 4562, Springfield 65808
Contact: **Linda Wheelen, S. Executive Secretary**

June 11-12	1982 Annual Meeting (Alameda Plaza, Kansas City)

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673 or (314) 454-3873
Contact: **Loretta Giacoletto, Office of CME**

May 24-28	Diagnostic Interview Schedule Training; 1982
June 10	Prevention of Hepatitus B Virus Infection With Vaccine and Immunoglobulin
Sept. 11	Flap Symposium: Management of Large and Complicated Wounds
Oct. 29-30	Conference: Spinal Disorders in Children

St. Louis University Medical Center
Continuing Education
3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
Contact: **John A. Grellner, Director**

Apr. 22-23	Symposium on Cardiac Rehabilitation: State of the Art-1982

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

Contact: **David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

Freeman Hospital
1102 W. 32nd, Joplin 64801
(417) 623-2801, Ext. 310
Contact: **Joy W. Barnett, CME Coordinator**

Apr. 24	Spring Seminar: Clinical Pulmonary Medicine — Evaluation and Management

Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
Contact: **Richard B. Oglesby, M.D.**

May 16	14th Eye Seminar: Extracapsular Cataract Extraction
Sept. 12	15th Eye Seminar — Surface Correction of Aphakia

Cardinal Glennon Memorial Hospital
1465 S. Grand Blvd., St. Louis 63104
(314) 577-5693
Contact: Department of Education

June 16-18	Current Topics: Ambulatory Pediatrics (Tan-Tar-A Resort, Lake of the Ozarks. Co-sponsors: St. Louis University Department of Pediatrics/Adolescent Medicine and Missouri Chapter, American Academy of Pediatrics)

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

June 5	Symposium on Physical Fitness (Crown Center Hotel)
Sept. 24-25	The Long Weekend: Rheumatology, Dermatology, Oncology, and Gastroenterology (Alameda Plaza Hotel)
Sept. 24-26	Ozark Chest Conference (Osage House, Lake Ozark. Contact Susan K. Pingleton, M.D. (816) 474-4100)
Oct. 8	Quality Living for the Terminally Ill and Their Families (Hospice Care) (St. Luke's Hospital)

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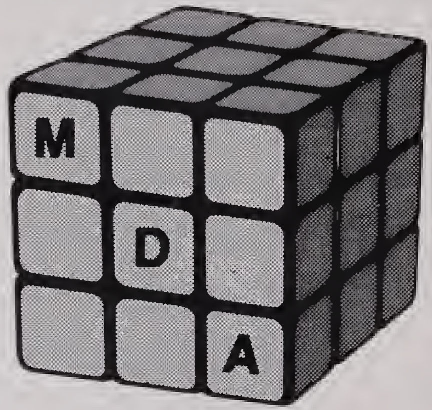

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INDICATIONS: Ru-Vert is indicated as an adjunct therapy in the symptomatic treatment of acute or chronic vertigo.

CONTRAINDICATIONS: Convulsive disorders or known history of sensitivity to any of the listed active ingredients. Because of the vasodilating action of nicotinic acid, Ru-Vert should not be used in patients with hypotension.

WARNINGS: The safety of this preparation during pregnancy and lactation has not been established. Use of this drug requires that the physician evaluate the potential benefits of the drug against any possible hazard to the mother and child.

PRECAUTIONS: Although there are no absolute contraindications to pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold or a focal brain lesion. Caution should be exercised when treating patients with high doses of Ru-Vert who have heart disease. While pentylenetetrazol does not act directly on the myocardium, the results from central vagal stimulation could cause bradycardia.

Pheniramine maleate, like other antihistamines, may produce sedative side effects in certain patients.

Transient vasodilatation due to rapid absorption of nicotinic acid may produce facial flushing and a sensation of warmth. These effects may be ameliorated by recommending that Ru-Vert be taken following meals or with food.

ADVERSE REACTIONS: Pentylenetetrazol in high doses may produce toxic symptoms typical of central nervous system stimulants, which act on the higher motor centers and the spinal cord. Convulsions resulting from this drug are spontaneous and are not induced by external stimuli. They usually last for several minutes and are followed by profound depression and respiratory paralysis. Death has been reported from the ingestion of 10 grams of pentylenetetrazol.

DRUG ABUSE: Drug dependence has not been reported with Ru-Vert.

OVERDOSAGE: Signs and symptoms of acute overdose may be due primarily from overstimulation of the central nervous system and from excessive vasodilatation with resulting autonomic nervous system imbalance. The symptoms may include the following: vomiting, agitation, tremors, hyperreflexia, sweating, confusion, hallucinations, headache, hyperpyrexia, tachycardia. Treatment consists of appropriate supportive measures. If signs and symptoms are not too severe and the patient is conscious, gastric evacuation may be accomplished by induction of emesis or gastric lavage.

Intensive care must be provided to maintain adequate circulation and respiratory exchange.

DOSAGE AND ADMINISTRATION: The recommended dosage of Ru-Vert for vertigo or motion sickness is 1 or 2 tablets three times a day with meals or light snacks.

This drug is not for use in children under 12 years of age.

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In Memoriam

Clement Bovard Grebel, M.D., 53 Grantwood Lane, Grantwood Village 63123; graduate of St. Louis University, 1948; member of St. Louis Metropolitan Medical Society; aged 58; died March 26, 1982.

William Tupper Plumpe, M.D., 4415 Minnesota Ave., St. Louis 63111; graduate of Washington University, 1930; member of St. Louis Metropolitan Medical Society; aged 77; died March 26, 1982.

Thomas E. McMillan, M.D., 8201 Dearborn Dr., Prairie Village 66208; graduate of Washington University, 1936; member of Jackson County Medical Society; aged 71; died April 1, 1982.

Kendall A. Clark, M.D., Rt. 4, Box 421, Fulton 65251; graduate of Northwestern University, 1943; member of Cole County Medical Society; aged 72; died April 9, 1982.

Leon F. Weyerich, M.D., 152 Linden Ave., Clayton 63105; graduate of St. Louis University, 1934; member of St. Louis Metropolitan Medical Society; aged 73; died April 13, 1982.

Percutaneous Nephrostomy

(Continued from page 284)

3. Bartley, O., Chidekel, N. and Radberg, C.: Percutaneous Drainage of the Renal Pelvis for Uraemia Due to Obstructed Urinary Outflow. Acta Scand. 129:443, 1965.
4. Fowler, J. E., Jr., Meares, E. M., Jr. and Goldin, A. R.: Percutaneous Nephrostomy: Techniques, Indications, and Results. Urology 6:428, 1975.
5. Barbaric, Z. L. and Wood, B. P.: Emergency Percutaneous Nephropyelostomy: Experience With 34 Patients and Review of the Literature. Amer. J. Roentgenol. 128:453, 1977.
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Notes of interest from Here . . . . and There

On April 17, **Dr. F. T. H'Doubler, Jr.**, Springfield, was decorated with the Bronze Star Medal with Combat "V" during ceremonies at the Springfield Naval and Marine Corps Reserve Center. Quoting excerpts from a report by staff writer Julie Westerman of the *Springfield News & Leader*, Dr. H'Doubler "never forgot that September day in 1950 when, as an assistant battalion surgeon in the Korean Inchon-Seoul Campaign, he was wounded as he helped an injured hospitalman.

"His aid station had come under an enemy mortar barrage, and after ordering all the other members of his staff to evacuate the area, he remained to give emergency first aid to the wounded man, who later died.

"But someone else also remembered that act of courage and, some 30 years later, saw to it that H'Doubler would be appropriately honored."

Included in the citation was "By his steadfast courage, unrelenting perseverance and selfless devotion to duty, in the face of enemy oppression, Lt. H'Doubler reflected great credit upon himself and upheld the highest traditions of the United States Naval Service."

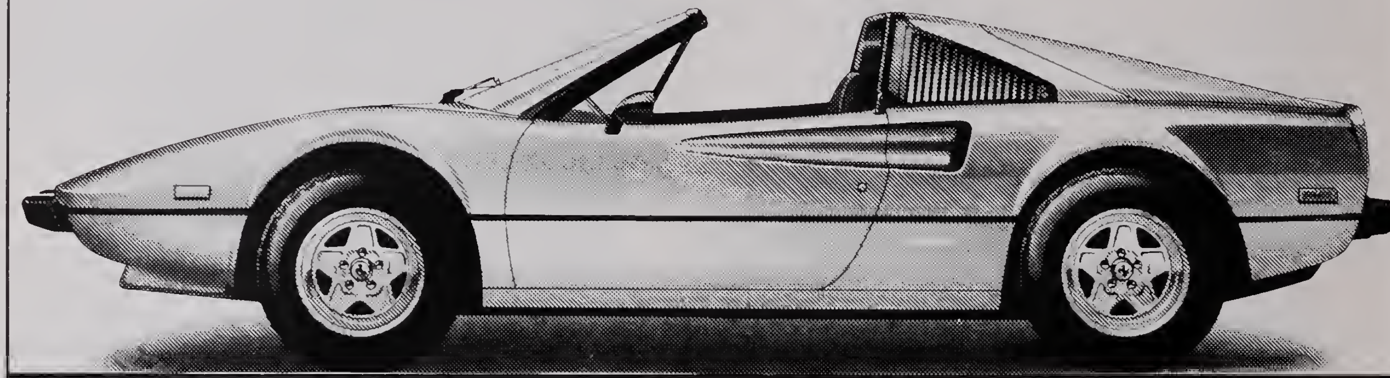
At the time, Dr. H'Doubler was attached to the Marine Corps as a Navy doctor. He joined the Navy when he was 17 years old.

Dr. Carlos A. Perez, professor of radiology and director of the Division of Radiation Oncology at Mallinckrodt Institute in St. Louis, has been elected president for 1982 of the American Society of Therapeutic Radiologists (ASTR). He is the youngest radiologist to hold this office. With a membership of more than 1,000, ASTR directs its efforts to the highest possible standards of therapeutic radiology in patient care, medical education, clinical and laboratory research, giving particular emphasis to strengthening the interchange between allied disciplines.

Dr. Gary A. Dyer, St. Joseph, was installed as president of the Missouri Dermatological Society for 1982-1983 at its annual spring meeting in Kansas City. Dr. Dyer is the immediate past-president of Buchanan County Medical Society and a delegate to the MSMA Annual Convention. He also is vice-councilor for the MSMA First Councilor District. Other officers installed are **Dr. James Roller**, Columbia, president-elect, and **Dr. Dallas Johnson**, Kansas City, secretary-treasurer. **Dr. Lester T. Reese**, St. Louis, is the immediate past-president.

Dr. Hubert Parker, who has been associated with St. Mary's Hospital in Kansas City for almost 50 years, has been honored with an Annual Lectureship in Medicine made in his name. He will serve as permanent chairman of the selection committee for a nationally known speaker to be jointly sponsored by the medical staff and the hospital administration. In the late 1920s, Dr. Parker and another physician, **Dr. Paul Stookey**, developed an antitoxin for stapholococcus bacterium. It is marketed by Lilly. Dr. Parker joined St. Mary's staff in 1934. In World War II, he was chief of medicine at the 1,500-bed Tokyo General Hospital, having been appointed by Gen. Douglas MacArthur.

What can be conceived can be created



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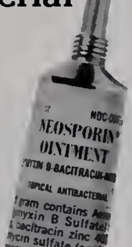

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INDICATIONS: *Therapeutically* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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Mrs. Sam Gaston Elected President of MSMA Auxiliary

Mrs. Sam L. Gaston, Joplin, was installed as president of the MSMA Auxiliary at its 57th Annual Convention held in conjunction with the MSMA Annual Convention at the Hyatt Regency Hotel in Kansas City on April 1-4.

As a member of the Auxiliary Executive Board, Mrs. Gaston has served as president-elect, vice-president for membership (three years), a member of the Reading Committee and Project Bank and Mental Health chairman.

She was president of the Jasper County Medical Society Auxiliary in 1972-1973 and has continued to participate in auxiliary-sponsored activities. She was co-chairman for the Marriage Enrichment Seminar in Joplin in 1978 and helped to organize the Children's Health Fair in 1980. This is an ongoing auxiliary project presented to area third graders in the fall and spring.

Her participation in community affairs includes serving on the Foundation and Corporations Committee of the Development Council of St. John's Regional Medical Center, Board of Directors of the Missouri Southern State College Alumni Association and the Advisory Board of the Baptist Student Union on the college campus. She is active in other civic and cultural organizations and has taught a Sunday School youth class for ten years.

Mrs. Gaston earned her bachelor's degree in English and psychology and graduated with honors at Missouri Southern State College in 1980. She was elected to membership in *Who's Who Among Students in American Colleges and Universities* and was designated the outstanding English major of the class of 1980. She is a member of Sigma Tau Delta, national honor fraternity for English majors, and Psi Chi, psychology national honor society. She is now enrolled in the master's degree program in counseling at Pittsburg State University but is taking a sabbatical leave from course work while serving as president of the MSMA Auxiliary.

Dr. and Mrs. Gaston are the parents of three children: Dr. Robert Gaston, who is a third-year resident in internal medicine at the Medical Center for Health Sciences in Little Rock, Ark.; Susan, whose husband, Tim Tarvin is an attorney in Hamburg, Ark; and Laura, who is a pre-law and English and music (piano) major at the University of Arkansas in Fayetteville. She will graduate this month.

Dr. Gaston is a specialist in radiology.

Other Auxiliary officers elected for 1982-1983 are Mrs. Donald C. Sanders, Kansas City, president-elect; Mrs. Richard Bowles, Liberty, first vice-president; Mrs. William Goodson, Jr., Kansas City, second vice-president; Mrs. George Bohigian, St. Louis, third vice-president; Mrs. W. C. Dandridge, Jr., Joplin, fourth vice-president; Mrs. John D. Mitchell, Shawnee Mission, Kan., recording secretary; Mrs. James T. Shaw, Hermann, treasurer; Mrs. Curtis Bourgeois, Rocheport, auditor; Mrs. Howard Roberts, Joplin, corresponding secretary; and Mrs. George P. Wilson, Columbia, parliamentarian.

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MSMF/AMA-ERF Fourth Annual Benefit Auction a Success

The fourth effort to create funds via a benefit auction for the Missouri State Medical Foundation (MSMF) and the American Medical Association Education and Research Fund (AMA-ERF) proved to be successful during the MSMA Annual Convention in April in Kansas City.

Co-sponsored by the MSMA and the MSMA Auxiliary, proceeds gained from this year's auction totalled approximately $8,400. This boosts the four-year total to approximately $33,400.

Co-chairmen for arrangements for the event were Mrs. A. J. Campbell of Sedalia and Mrs. Clyde Martin of Shawnee Mission, Kan.

The MSMF is the Missouri State Medical Association's not-for-profit corporation to grant loans at special rates to young Missouri men and women studying medicine. It was established in 1961.

The MSMA Council voted an original appropriation of $25,000 for student loan purposes. Twenty years later, the program has provided more than $1,200,000 in loans.

With inflation causing tuition to continually rise and the federal government cutting funds that were available to medical students, the schools of medicine in Missouri now look to the Foundation as a vital component to their financial aid resources. It is not uncommon to find student loan sources with interest rates from 7% to 18% and stringent repayment provisions. By comparison, the MSMF's interest rate is 4% while the students are in medical school and 8% during their resident training. The rate appreciates to 10% while they are in private practice. Repayment does not begin until one year after the physician has initiated the private practice of medicine.

The MSMF Board of Trustees has continued to declare that the major thrust of the Foundation is to make funds available to those men and women who otherwise may not be able to study medicine.

Items to be auctioned are contributed by MSMA and Auxiliary members and friends. Individuals who bid successfully are privileged to name the fund recipient of their contributions.

MSMA and Auxiliary members are asked to plan now for their item contributions for the 1983 Benefit Auction.

Are the results of
$100 million worth of
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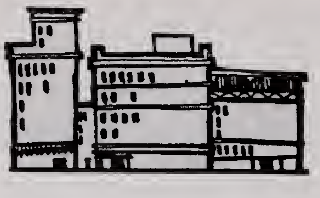
on hypertension
worth reading about?



NEWS

From the Medical Schools

WASHINGTON UNIVERSITY

Arnold S. Relman, M.D., editor of the internally acclaimed *New England Journal of Medicine,* delivered the second Estelle Brodman Lecture at the School of Medicine on April 16.

His lecture was entitled "Editing a General Medical Journal."

The Lectureship is named in honor of the previous Director of the Medical School Library and Professor of Medical History at Washington University School of Medicine from 1961 to 1981.

Dr. Relman graduated from Columbia University College of Physicians and Surgeons in 1946 and served his residency at the New Haven Hospital in New Haven, Conn. He joined Boston University School of Medicine in 1950 as an assistant professor of medicine. In 1956, he became an associate professor of medicine there and, in 1961, a professor.

In 1968, Dr. Relman left Boston University to become the Frank Wister Thomas Professor of Medicine and Chairman of the Department of Medicine at the University of Pennsylvania. Nine years later, he relinquished both duties at the school to become editor of the *New England Journal of Medicine*.

Dr. Relman has served on numerous advisory committees including the National Academy of Sciences, the U.S. Public Health Service, the American College of Surgeons and the National Board of Medical Examiners.

A recipient of numerous awards, he holds three honorary degrees as well as awards from the National Research Council, the National Institutes of Health and the Josiah Macy, Jr., Foundation.

A group of tobacco firms that has been supporting cancer research at Washington University School of Medicine for the past 11 years through industry grants are increasing their annual allotment to the school by $100,000 or to $500,000 per year. To date, more than $5,000,000 has been donated.

The additional $100,000 will be used to finance the transplantation immunology work of *Paul E. Lacy,* M.D., Ph.D., Edward Mallinckrodt Professor and Head of the Department of Pathology at the School of Medicine. Dr. Lacy and six other Washington University scientists are involved in cancer research funded by the tobacco industry grants.

These researchers have been studying the cellular and molecular basis of cancer in related but independent projects. They hope that this basic research will lead to improved therapy and prevention of cancer.

The tobacco group represents some of the nation's largest cigarette manufacturers.

ST. LOUIS UNIVERSITY

William Stoneman, III, M.D., has been appointed dean of St. Louis University School of Medicine and will begin his new duties July 1, 1982. Dr. Stoneman will replace *David Challoner,* M.D., who will leave the School of Medicine in June to become vice-president for health affairs at the University of Florida in Gainesville.

"It is an honor to be invited by my alma mater to succeed Dean Challoner, who has provided spirited leadership to this fine school over the past seven years," Stoneman said. "I look forward to a particularly challenging period for our faculty and students as we continue to pursue excellence in education, research and service. Our success in that is important to St. Louis as well as to the University."

Dr. Stoneman

Dr. Stoneman has been executive associate dean at the School of Medicine since 1976. He also holds the positions of associate professor of surgery, associate professor of community medicine and director of the Margaret McCormick Doisy Learning Resources Center at the Medical Center.

Rev. Thomas Fitzgerald, S.J., president, St. Louis University, announced the appointment.

Dr. Stoneman obtained his bachelor of science degree from St. Louis University in 1948. He graduated from St. Louis University School of Medicine in 1952 and completed residencies in surgery and plastic surgery at St. Louis University Hospitals and is a diplomate of the American Board of Surgery and the American Board of Plastic Surgery. A faculty member at St. Louis University since 1959, he directed the Bi-State Regional Medical Program, involving Washington, St. Louis, and Southern Illinois universities from 1968 to 1974.

Dr. Stoneman is a member of the American Medical Association, Missouri State Medical Association, American Society of Plastic and Reconstructive Surgeons, St. Louis Metropolitan Medical Society and other professional organizations.

Max K. Horwitt, Ph.D., professor emeritus of biochemistry, has been named a Fellow of the American Institute of Nutrition (AIN). Each year, the AIN recognizes senior scientists who have had distinguished careers in nutrition.

Dr. Howitt earned his Ph.D. degree at Yale University in 1935 where he continued as a postdoctoral fellow for two years. He then became director of the Biochemical Research Laboratory at Elgin State Hospital in Illinois. During the next 30 years, he carried out long-term metabolic studies on the requirement of thiamine and riboflavin in humans, quantifying the conversion of trytophan to niacin and evaluating requirements for Vitamin E and its relation to fatty acid metabolism. In his honor, a new research laboratory, the Lafayette B. Mendel Research Laboratory, was dedicated at Elgin State Hospital in 1960.

In 1968, Dr. Horwitt was appointed professor of biochemistry at St. Louis University School of Medicine. He spent his first two years in this position as field director of the Anemia and Malnutrition Research Center in Chaing Mai, Thailand. In 1979, he was named professor emeritus at St. Louis University.

UNIVERSITY OF MISSOURI-KANSAS CITY

Graduation week activities at the School of Medicine began on Monday, May 10 with the annual senior banquet at the Hilton Plaza Inn, when graduating seniors received the "Not Serious Awards." On Tuesday, courtesy of Marion Laboratories, the seniors had their traditional

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

night at the Kansas City Royals game. On Wednesday evening, the Hospital Hill Health Services Corporation sponsored its annual cocktail party. Friday was the day for the first annual Carl Migliazzo Memorial Lecture, when *Dr. Frederick Robbins,* president of the Institute of Medicine and Nobel Laureate, delivered his address, "Medicine in a Changing World." Later that afternoon, the seniors took the Oath of Physicians in the Performing Arts Center on the Volker campus. The week ended on Saturday with commencement exercises when the School of Medicine graduated 77 new physicians.

The following graduating medical students received the following awards at the Oath of Physicians ceremony on May 14: *Robert J. Stuppy,* Missouri State Medical Association Award; *Jonathan K. Foley,* Department of Surgery Award; *Mika M. Kamada* and *Elizabeth A. Simpson,* AMWA Honor Graduates; *Sammy Lee Alexander* and *Edward F. Ellerbeck,* Lange Medical Publications Award; *W. Mark Roberts* and *Robert S. Thomas, Jr.,* Merck and Company, Inc. Award; *Elizabeth Simpson,* Lemmon Company Award in Obstetrics and Gynecology; *Mark P. Walsma,* Upjohn Company Award; *Anne F. Jones,* St. Louis Friends Research Award; and *William T. Boulware,* St. Louis Friends Basic Science Award.

Dr. Loretta Loftus joined the School of Medicine faculty on April 1 as an assistant professor and docent. Following her graduation from the University of Kansas Medical School and completion of an internal medicine residency there, Dr. Loftus spent three years as a fellow in hematology and medical oncology at the University of Rochester Strong Memorial Hospital in New York.

Marilyn K. McGuyre, associate director of the Office of Medical Education (OME) at UMKC, received the School of Medicine's first Outstanding Administrative Service Award from *Dean Harry S. Jonas* on April 14. Ms. McGuyre began working for the University as an administrative secretary at the old Kansas General Hospital in 1970. In 1974, she became assistant to the director of the Office of Medical Education and in 1975 she was appoined assistant director. She has served as associate director of OME since 1977. She has B.A. and M.S. degrees from UMKC.

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. Samuel P. W. Black, professor of neurosurgery, has retired after 26 years on the faculty.

After receiving his Bachelor of Science degree from Yale University, Dr. Black earned his M.D. degree from Johns Hopkins University. After an internship at the New Haven Hospital and two years' of active duty in the United States Navy, he served his residencies at the Hartford Hospital and the New Haven Hospital before joining the faculty of Yale University in 1952 as an assistant professor of neurosurgery.

Dr. Black joined the University of Missouri-Columbia faculty in July, 1955 as an associate professor of neurosurgery and served as chief of the Division of Neurological Surgery from 1958 through 1975. He served as consultant in neurosurgery to the Missouri Crippled Children's Service, the Ellis Fischel State Cancer Hospital and the Veterans Administration Hospital in Columbia.

Certified by the American Board of Neurological Surgery and a Diplomate of the National Board of Medical Examiners, Dr. Black is a member of the American College of Surgeons, the American Association of Neurological Surgeons and the Missouri State Neurosurgical Society for which he served as president in 1980-1981.

Dr. Max Hamilton, clinical professor of psychiatry at the University of Missouri-Columbia School of Medicine and emeritus professor of psychiatry at the University of Leeds School of Medicine, was elected to Honorary Fellowship in the Royal College of Psychiatrists of England at the College's spring quarterly meeting in Liverpool, England on April 21. Election to Honorary Fellowship in the Royal College is considered the College's highest honor and is reserved for international leaders in the field.

Professor Hamilton has had a long and distinguished career in the field of psychiatry. He is the author of several books and many scientific papers as well as the standard testing instrument for affective disorder, the Hamilton Depression Scale. This year Professor Hamilton also holds the office of president of the British Academy of Psychopharmacology. He has been associated with collaborative research and academic exchange programs at the University of Missouri-Columbia since Sept. 1, 1972.

Dr. Clark Watts, professor and chief of the Division of Neurological Surgery of the School of Medicine's Department of Surgery addressed the annual meeting of the Southern Neurosurgical Society in White Sulphur Springs, West Virginia on March 13. His subject was "Mechanisms of Action of Chymopapain FDA in Lumbar Disc Disease."

New Members

John A. Brim, 4940 Audubon, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Brim is a native of Springfield, received his preliminary education at Rutgers University and Washington University and his M.D. degree at Washington University in 1978. He specializes in psychiatry.

John P. Canale, M.D., Department of Psychiatry, Barnes Hospital, St. Louis 63110, has become a member of St. Charles-Lincoln County Medical Society. Dr. Canale is a native of Syracuse, N.Y., received his preliminary education at Syracuse University and his M.D. degree at the State University of New York in 1977. He specializes in psychiatry.

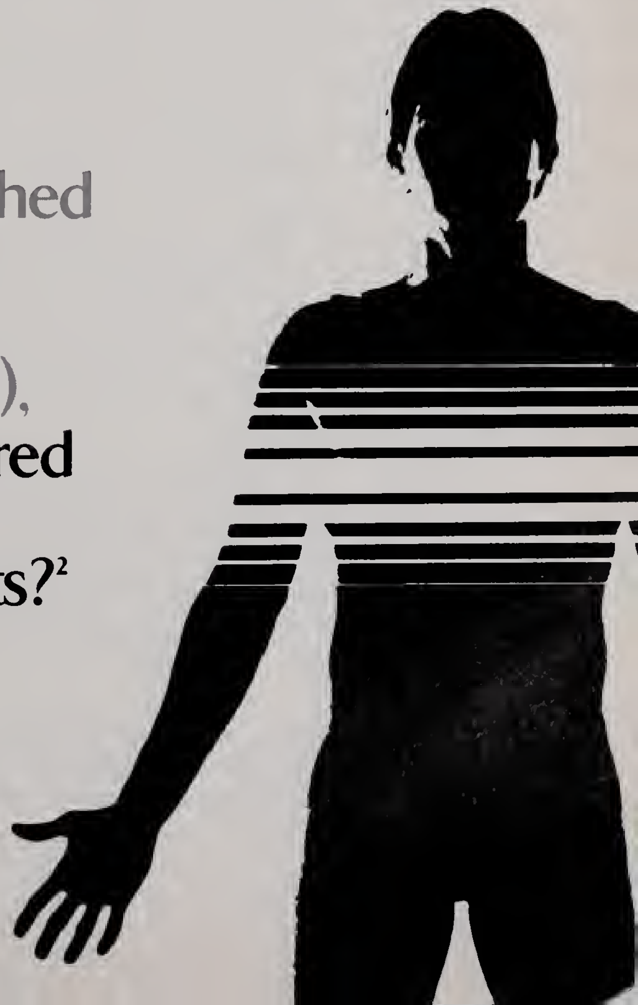
Michael D. DePriest, M.D., 4989 Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. DePriest is a native of Ridgeway, received his preliminary education at Johns Hopkins University and his M.D. degree at the University of Missouri-Columbia in 1980. He specializes in general surgery.

Jerry L. Goddard, M.D., 211 St. Francis Dr., Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Goddard is a native of Anna, Ill., received his preliminary education at Southern Illinois University and his M.D. degree at Tulane University in 1970. He specializes in family practice.

John C. Gorman, M.D. 224 S. Woodsmill Rd., Chesterfield 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. Gorman is a native of Teaneck N.J., received his preliminary education at the University of Kansas and Rutgers University and his M.D. degree at Washington University in 1974. He specializes in internal medicine and rheumatology.

Generoso R. Guzman, M.D. Highway 114 West, Dexter 63841, has become a member of SEMO County Medical Society. Dr. Guzman is a native of the Philippines, received his preliminary education at Manila Central University and his M.D. degree at Manila Central University in 1962. He specializes in obstetrics and gynecology.

Roger W. Hood, M.D., 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Hood is a native of McLeansboro, Ill., received his preliminary



In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study),
which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]

education at Southern Illinois University and his M.D. degree at Loyola-Stritch University in 1974. He specializes in orthopaedic surgery.

Dilber Hussein, M.D., 1235 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Hussein is a native of Nairobi, Kenya, received his preliminary education at Foseman Christian College and his M.D. degree at Dow Medical College in 1966. He specializes in anesthesiology.

Jack E. Jensen, M.D., P.O. Box O, Columbia 65201, has become a member of Boone County Medical Society. Dr. Jensen is a native of Columbia, received his preliminary education at Washburn University and his M.D. degree at Kansas University in 1976. He specializes in orthopedic surgery.

James E. Jones, D.O., 418 S. Church St., P.O. Box, St. Peters 63376, has become a member of St. Charles-Lincoln County Medical Society. Dr. Jones is a native of Poplar Bluff, received his preliminary education at Western Illinois University and his D.O. degree at Kirksville College of Osteopathic Medicine in 1966. He specializes in general practice.

Maurice D. Krause, M.D., 1423 N. Jefferson, Springfield 65802, has become a member of Greene County Medical Society. Dr. Krause is a native of South Bend, Ind. received his preliminary education at Indiana University and his M.D. degree at Indiana University in 1968. He specializes in radiology and oncology.

Scott C. Ludwig, M.D., 1235 E. Cherokee, Springfield 65804, has become a member of Greene County Medical Society. Dr. Ludwig is a native of Urbana, Ill., received his preliminary education at the University of Iowa and his M.D. degree at the University of Iowa in 1977. He specializes in emergency medicine.

Thomas D. Margulies, M.D., 621 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Margulies is a native of Des Moines, Iowa, received his preliminary education at the University of Iowa and his M.D. degree at Washington University in 1978. He specializes in internal medicine.

Delia A. Matias, M.D., 10 Reviera Dr., Columbia 65202, has become a member of Boone County Medical Society. Dr. Matias is a native of the Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of the East in 1969. She specializes in pediatrics.

Charles E. Mengel, M.D., 1513 Union, Moberly 65270, has become a member of Chariton-Macon-Monroe-Randolph county Medical Society. Dr. Mengel is a native of Baltimore, Md., received his preliminary education at Lafayette College and his M.D. degree at Johns Hopkins University in 1957. He specializes in internal medicine, hematology and oncology.

John S. Mitchell, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Mitchell is a native of Evanston, Ill., received his preliminary education at the University of Missouri-Rolla and his M.D. degree at St. Louis University in 1981. He specializes in internal medicine.

James J. Mongan, M.D., 2220 Holmes Rd., Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Mongan is a native of San Francisco, Calif., received his preliminary education at Stanford University and his M.D. degree at Stanford University in 1967. He specializes in administration.

John W. Moranz, M.D., P.O. Box 73, Bunker 63629, has become a member of Mid-Missouri County Medical Society. Dr. Moranz is a native of Pittsburgh, Pa., received his preliminary education at Birmingham Southern College and his M.D. degree at the University of Alabama in 1962. He specializes in family practice and ortorhinolaryngology.

Jeffrey A. Nerad, M.D., 3665 Vista, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Nerad is a native of Chicago, Ill., received his preliminary education at the University of California-Los Angeles and his M.D. degree at St. Louis University in 1979. He specializes in ophthalmology.

John C. Perlmutter, M.D., 2860 W. Clay, St. Charles 63310, has become a member of St. Charles-Lincoln County Medical Society. Dr. Perlmutter is a native of New York, N.Y., received his preliminary education at Queens College and his M.D. degree at Cornell University in 1971. He specializes in neuro-ophthalmology.

Patrick K. Price, M.D., 17421 Medical Center Parkway, Independence 64057, has become a member of Jackson County Medical Society. Dr. Price is a native of Atchison, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1975. He specializes in ophthalmology.

Sataya Satayaviboon, M.D., 1420 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Satayaviboon is a native of Bangkok, Thailand, received his preliminary education at Chiang Mai University and his M.D. degree at Chiang Mai University in 1975. He specializes in pediatrics and allergy-immunology.

Dennis W. Smith, M.D., 3302 McIntosh, Joplin 64081, has become a member of Jasper County Medical Society. Dr. Smith is a native of Newport News, Va., received his preliminary education at Virginia State University and his M.D. degree at the Medical College of Virginia in 1975. He specializes in internal medicine.

William J. Somerset, D.O., 10 Fieldcrest Lane, St. Joseph 64506 has become a member of Buchanan County Medical Society. Dr. Somerset is a native of Philadelphia, Pa., received his preliminary education at Seton Hall University and his D.O. degree at Philadelphia College of Osteopathic Medicine in 1974. He specializes in physical medicine and rehabilitation.

Keith M. Starke, M.D., 645 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Starke is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1981. He specializes in internal medicine.

Kosuri V. Subbaiah, M.D., 2639 Miami St., St. Louis 63118, has become member of St. Louis Metropolitan Medical Society. Dr. Subbaiah is a native of India, received his preliminary education at A. L. College and his M.D. degree at Kurnool Medical College in 1975. He specializes in anesthesiology.

Craig P. Tillman, M.D., 2901 W. Rollins, Columbia 65201, has become a member of Boone County Medical Society. Dr. Tillman is a native of Springfield, Ill., received his preliminary education at Augustana College and his M.D. degree at the University of Illinois in 1979. He specializes in diagnostic radiology.

William A. Turner, M.D., Nevada Medical Clinic, Nevada 64772, has become a member of

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

West Central Missouri County Medical Society. Dr. Turner is a native of Bartlesville, Okla., received his preliminary eduation at Oklahoma University and his M.D. degree at the University of Oklahoma in 1975. He specializes in general surgery.

Oswaldo E. Vilela, M.D., 909 S. Pershing, Salem 65560, has become a member of Mid-Missouri Medical Society. Dr. Vilela is a native of Talara, Peru, received his preliminary education at San Marcos University and his M.D. degree at San Marcos University in 1971. He specializes in obstetrics and gynecology.

George C. Vournas, M.D., 12255 DePaul Dr., Bridgeton 63044, has become a member of St. Louis Metropolitan Medical Society. Dr. Vournas is a native of St. Louis, received his preliminary education at Amherst College and his M.D degree at St. Louis University in 1976. He specializes in cardiology and internal medicine.

Kenneth B. Washburn, M.D., 1235 E. Cherokee, Springfield 65804, has become a member of Greene County Medical Society. Dr. Washburn is a native of Berthold, N.D., received his preliminary education at Washington University and his M.D. degree at the University of Missouri-Columbia in 1961. He specializes in physical medicine and rehabilitation.

Samuel A. Wells, Jr., 4960 Audubon Ave., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Wells is a native of Cuthbert, Ga., received his preliminary education at Emory University and his M.D. degree at Emory University in 1961. He specializes in surgery.

Thomas P. Wescott, D.O., 217 S. Market, Holden 64040, has become a member of Johnson County Medical Society. Dr. Wescott is a native of Berlin Center, Ohio, received his preliminary education at Dana Institute and his D.O degree at Kirksville College of Osteopathic Medicine in 1949. He specializes in general practice.

Charles J. Willey, M.D., 615 S. New Ballas, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Willey is a native of St. Louis, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1981. He specializes in internal medicine.

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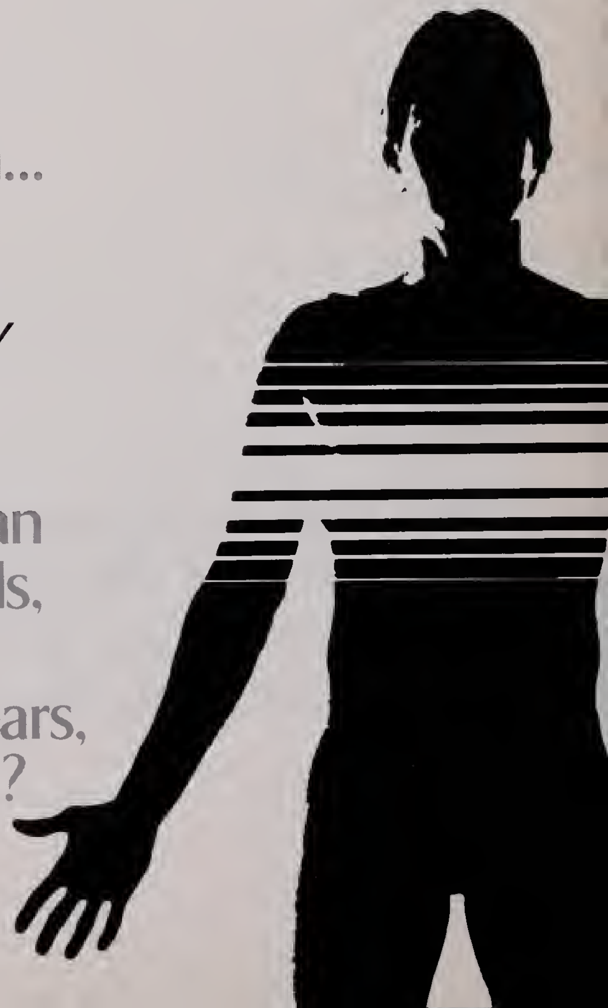

New Student Members

St. Louis University

Edward J. Bernaski
Irene G. Bieg
Arthur H. Eskew
John C. Galanis
Hauw T. Han
Michael G. Malon
Paul C. Marut
Jule P. Miller
David P. Mooney
Catherine A. Odell
Vanessa T. Pero
Mark J. Stout
David W. Strege

University of Missouri-Columbia

Alan G. Wynne

University of Missouri-Kansas City

Karl L. Breitenbach
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Brad W. Warner

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In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

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SM-2348 11/81

AMA Impaired Physician Conference Set for September

The American Medical Association will hold its Fifth National Conference on the Impaired Physician in Portland, Ore., on Sept. 22-25, 1982. The meeting is sponsored jointly by the Oregon Medical Association and the AMA and will be held in the Portland Marriott.

Physician impairment, whether due to drug abuse, alcoholism, mental illness or senility, has long been of concern to the AMA. For the past ten years, the Association has actively encouraged all segments of the medical community to recognize and treat the problems of the impaired physician and, periodically, hosts national meetings to bring together experts in the field.

The theme of this conference is "1982-1992: A Decade of Progress — A Decade of Promise." Topics include the physician's health in a changing society, preventing burnout, stress and the practicing physician, and a discussion on medicine's responsibility for impaired physicians and other professionals. The conference program has topics of concern to medical students and physicians at various experience levels — residents, practicing physicians and elderly physicians.

A progress report on the Physician Mortality Project, a cooperative venture of the AMA and the American Psychiatric Association, will also be presented.

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For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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USUAL DOSE

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References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE 4-4 VOTE of the U. S. Supreme Court in the Federal Trade Commission's dispute with the AMA over physician advertising is a "clear signal" that Congress will have to deal with the issue of FTC jurisdiction over professional associations, the AMA said. The high court's decision left standing a Circuit Court of Appeals ruling which upheld the FTC order against the AMA. In a statement to a congressional subcommittee, the AMA urged support for a bill that would place limitations on the actions and jurisdiction of the FTC, including its jurisdiction over state-regulated professions. "Professional associations are not afraid of being subject to antitrust laws," the AMA told the subcommittee, but "clearly the courts provide a better forum for resolution of antitrust issues than an independent federal commission with hearings before an administrative law judge who is an employee of the commission."

THE AMA OPPOSED two bills that would alter the PSRO program and told Congress that "a system of voluntary medical peer review could act effectively in reviewing to assure the quality of medical care for all patients." In its testimony, the AMA said the two bills (S2142 and S1250) "would continue many of the objectionable features of the existing Professional Standards Review Program." The AMA said voluntary peer review could be accomplished without the substantial government expense of either PSRO or the proposed legislation, adding: "The AMA will continue in the development of voluntary peer review. We believe that a voluntary system of peer review would serve the best interests of both the recipient and the provider of medical care."

LEGISLATION to clarify the tax status of independent contractors was supported by the AMA in a letter to the Senate Finance Committee, but the Association called for amendments "to help assure that qualifying physicians who traditionally have been considered independent contractors not be improperly reclassified as employees." The letter was sent on behalf of the AMA, the American College of Radiology, the American College of Emergency Physicians, and the College of American Pathologists. In the late 1960s, the Internal Revenue Service began attempts to reclassify independent contractors as employees. In 1978, Congress imposed a temporary moratorium on IRS rulings on the issue. The moratorium is scheduled to expire on July 1.

TEN STATE SOCIETIES will have more delegates in the 1982 House, according to membership-based allocation figures. No state will lose a delegate. New York will gain five delegates this year. Ohio will gain four. States gaining one delegate are California, Colorado, Florida, Illinois, Indiana, Massachusetts, Texas and Virginia. The total number of state medical society delegates will be 236.

TWO AMA MODEL BILLS have been sent to state medical associations and medical specialty societies for use in their legislative activities. A revised model bill would prohibit the manufacture, distribution or sale of imitation controlled substances. The other model bill, which pertains to professional liability actions, would reduce the amount of the court award by the sum of payments received by the plaintiff from such collateral sources as health and disability insurance.

A SLIDE TAPE PROGRAM describing the purpose and activities of the AMA's Resident Physicians Section is available on a loan basis without charge. The 12-minute color program covers the organizational structure, policymaking process, and benefits to the individual of RPS membership and participation. It is designed for viewing by resident physicians, medical society-RPS leaders, and medical society leadership and staff. For information contact Department of Resident Physician Services, AMA Headquarters.

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Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

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in shigellosis...
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Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae.* To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

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1. Rubin RH, Swartz MN: *N Engl J Med 303* 426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

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*due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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79:6

Missouri Medicine

Vol. 79, No. 6 (ISSN 0026-6620) June, 1982

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Diagnosis and Treatment

HLA in Human Disease: What Does It Mean?

Polymyalgia Rheumatica and Temporal Arteritis

University of Missouri-Columbia Health Sciences Center

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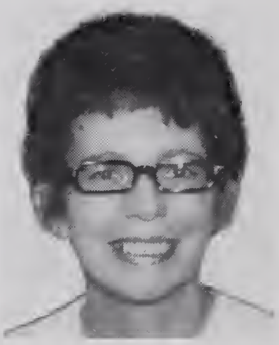

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Missouri State
Medical Association

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June, 1982

NEWS NEWS NEWS NEWS NEWS Round Up

MSMA insurance programs increase benefits

Added benefits in MSMA's insurance programs were announced at the MSMA Council meeting, May 22, in Columbia. Executive Secretary Royal O. Cooper announced that the maximum eligible expense for a hospital room has been increased in the major medical program, administered by Forrest T. Jones and Company and underwritten by Mutual Life Insurance Company of New York.

In addition, the program now covers 20 office visits for mental and nervous conditions and provides a $1,500 benefit for care in a psychiatric residential treatment center. The $10,000 limitation for bed patient care for mental and nervous conditions, including alcoholism, was eliminated.

Another program which has broadened its coverage is the disability insurance policy administered by Fred S. James and Company. They have increased the amount of monthly benefits available from $2,166 to $3,000 monthly. This fall members will be notified of the changes in this program.

One additional program that has increased benefits is the office overhead disability plan. The new plan now offers an increase in maximum benefits available from $3,000 to $5,000. This coverage is most important for the practicing physician where there are three or less members in one office.

In other actions, the Council:

- Approved submitting Dr. Linda Fisher, of St. Louis, as a nominee to the State Board of Registration for the Healing Arts.
- Announced that Dr. Philip J. LeFevre, of Springfield, will be attending the AMA Impaired Physician Conference in Portland, Oregon.
- Passed a resolution to allow the Clay County Medical Association to amend its bylaws so that it may reorganize with the Platte County Medical Society.
- Approved development of a "Building and Maintaining of a Healthy Practice" seminar to be held this fall. The seminar will cover such topics as evaluating a location, pricing, expanding referral sources, increasing visibility and effectively handling patients and staff.
- Approved resubmitting Dr. John Martin's nomination to the AMA Board of Trustees for the American Medical Political Action Committee Board.
- Recommended that MSMA support the efforts of the Division of Health to establish a state clearinghouse for physician placement, yet still maintain association placement efforts.
- Named the following members to a Medical School Liaison Committee: Dr. Charles C. Lobeck, Columbia; Dr. Harry Jonas, Kansas City; Dr. Robert MacDonald, Jr., St. Louis; and Dr. Larry Piepergerdes, Kansas City. Names have not been received from St. Louis University or Washington University.
- Reported that the Missouri Health Data Corporation has sent a written statement explaining its policy of destroying collected data once the corporation is finished with it.
- Named the following councilors to an ad hoc committee to make a proposed medicine/business coalition become a reality: Dr. T. J. Cooper, chairman; Drs. Richard Hedges, Patricio Avila, William Richardson, H. Peter Ekern, A. J. Campbell, Milton Ozar, Walter German, Jack Wiles and George Ladyman.
- Named the following members to an Ad Hoc Committee on Teenage Drug Abuse to be under the Commission on Public Affairs: Dr. Robert E. Bregant, chairman; Drs. William K. Rosen, Kirby L. Turner, Thomas C. Thomas, Katherine W. Smith and John Kellett.
- Made the following commission and committee appointments: Commission on Medical Economics, Dr. John K. Layle; Committee on Voluntary Health Agencies, Marvin R. Alberg; and Commission on Continuing Education and Health Manpower, Robert H. Ramsey.
- Referred a recommendation by the Commission on Continuing Education and Health Manpower to the Commission on Interspecialty Medicine. The Commission recommended that MSMA sponsor a second plenary session during the Annual Convention that would be of interest to all Missouri physicians.
- Referred a recommendation by the Commission on Continuing Education and Health Manpower to the Commission on Public Affairs. The Commission recommended establishing a statewide speakers bureau for MSMA physicians.
- Heard a report from Dr. Mohammad Akhter, director of the Division of Health. He urged MSMA participation in the planning of 1983 programs and services, for which block grant money will be used.
- Announced that Dr. William C. Allen, an orthopaedic surgeon, of Columbia, has been appointed chairman of the Governor's Council on Physical Fitness and Health. This 19-member committee will be offering programs specifically designed for children in school, employees and adults and elderly.
- Agreed to notify the State Board of Education that MSMA recommends that individual school boards make the decision regarding yearly physical examinations, since the state statute mandating teachers to obtain an annual physical examination was recently eliminated.
- Announced that the next Council meeting will be held September 10-11 at the Alameda Plaza in Kansas City.

1982 net income down for most physicians

Physicians' earnings apparently followed the downtrend of the general economy in the fourth quarter of last year, declining 4.3% from the previous quarter, according to the AMA's new Socioeconomic Monitoring Systems (SMS). Only general and family practice physicians showed a gain (4.7%) in net income over their third-quarter earnings.

The SMS also reported a decline in the average number of physicians' services per week during the first quarter of 1982. Compared to the fourth quarter of 1981, office visits were down 4.7%, hospitals rounds visits were off 2.5%, and operations, deliveries and assists declined 8.5%. Only emergency room and outpatients visits were up (11.4%) in the first quarter this year.

Attorney General looks at drug dispensation law

An unlicensed person working for a physician may only prepare and affix the label to a medication dispensed by a physician, according to an opinion handed down by the Missouri Attorney General.

Recently Rep. Robert Jackson, of Greenfield, sought the state Attorney General's opinion in regard to state law regarding unlicensed personnel dispensing prescription drugs.

Missouri state law (Section 338.010, RSMo 1978) prohibits an unlicensed person from compounding, dispensing or selling at retail a drug or medicine prescribed by a physician, except under certain limited circumstances.

In answering several questions Rep. Jackson had about the law, Attorney General John Ashcroft gave the following opinion: ". . . a licensed pharmacist may permit an unlicensed person to perform all steps incident to compounding, dispensing, labeling, and selling prescription drugs at retail, provided that the unlicensed person acts at all times in the presence of the licensed pharmacist and under his direct supervision.

"A licensed pharmacist need not personally perform the selection from bulk inventory of the type, strength and dosage of the drug prescribed, but must personally inspect and verify the accuracy and completeness of the label affixed to the prescription drug container and must verify the correctness of the contents of the drug container, before it is delivered or sold to the patient at retail.

"A physician may only allow an unlicensed person to prepare and affix, under his supervision, the label required by law to a medication he dispenses, and must personally perform all other aspects of the compounding and dispensing of his own prescription medications. The dispensing physician must personally perform the selection from inventory of the type, strength and dosage of the drug he prescribed; he must personally verify the accuracy and completeness of the contents of the label affixed to the patient's prescription container; and he must personally verify that the drug in the prescription container is in fact the drug indicated upon the prescription label."

While the Attorney General's opinion is not "state law," there is a great amount of research in its development. This can often be important when cases come before the courts.

Missouri adoptions down

New data from the Missouri Center for Health Statistics show that Missouri adoptions have dropped by 60%. The study reveals that the number of babies born out-of-wedlock, who were adopted within two years after birth, declined from 1,283 in 1968 to 523 adoptions in 1978.

Wayne Schramm, director of the state Bureau of Health Data Analysis, said the supply of infants available for adoption declined rapidly during the 1970s as legal abortions became more readily available and more single mothers opted to keep their babies.

Schramm noted that the initial drop in infant adoptions in the early 1970s coincided with the legalization of induced abortions in Kansas and New York, when many Missouri women traveled out of the state for legal services. Also during the 1970s, it became more socially acceptable for single mothers to raise their own children alone. The number of single women who chose this option after becoming pregnant increased by 28% from 1972 to 1978.

The decrease in adoptions occurred almost entirely among white infants. The study shows that less than 10% of the white babies born by single mothers during 1978 were relinquished at birth for adoption. This compares with 1968, when 37% of the white infants born out-of-wedlock were offered for adoption.

The adoption rate for nonwhite infants fell from 1.2 to 0.6% between 1968 and 1978.

Copies of the full report, *Recent Trend in Adoptions of Missouri Infants*, are available from the Missouri Center for Health Statistics, P.O. Box 570, Jefferson City, MO 65102 (314) 751-2713.

PR Update

Most likely you are already familiar with a newspaper column entitled "Medical Messages." Produced by MSMA's Public Affairs Commission, these columns contain a variety of common health care tips and are distributed bimonthly to 300 Missouri newspapers.

The purpose of the series is to present physicians' viewpoints on everyday activities which effect the general health of the public. Some of the topics that were featured this past year were safe hunting, frostbite, swimming, chicken pox, jet lag, racquetball and many others.

Beginning this month MSMA is offering this column to 65 major Missouri companies with employee newsletters.

If "Medical Messages" doesn't appear in your community newspaper or if you know of a newsletter that could use this column, please contact Debbie Sievert Karpiel, director of communications, Missouri State Medical Association, P.O. Box 1028, 113 Madison Street, Jefferson City, MO 65102 (314) 636-5151.

Challoner receives AMA award

This month David R. Challoner, M.D., professor of internal medicine and dean of the St. Louis University School of Medicine, will receive the American Medical Association's Doctor William Beaumont Award in Medicine. This is one of the AMA's most conveted awards.

Dr. Challoner, noted for his many medical science contributions, was selected by the AMA Board of Trustees. He will receive a $2,500 stipend and a plaque.

Since 1975, Dr. Challoner has been a professor and dean of the St. Louis University School of Medicine. At the end of this month, he will leave the school to assume the position of vice-president for health affairs at the University of Florida at Gainesville.

Public supports cutting costs

Most Americans support measures that they believe would help stop health care inflation, according to results of a study done by the Health Insurance Assn. of America.

Nearly 70% of those surveyed by HIAA said they thought health care costs were rising faster than the general inflation rate.

More than 80% said hospitals should be required to publish fees for medical services and room rates, and 77% said physicians should be required to publish their fees for various treatments and services.

The survey also showed that nearly 70% thought that people should be encouraged to follow more healthful lifestyles.

health care coalitions

In a period when the economy in general is creating growing national concerns, the rising costs of medical care are a focus of attention for the medical profession and for many other groups — business, insurers, hospitals, labor, consumers, and government. Our country is reviewing and reassessing private and public policies on costs, planning, and delivery of health care.

It is a time when all must share in the responsibility for finding solutions. And these solutions must be developed locally to deal with unique local problems. A relatively new type of group — the health care coalition — is coming to the fore as a promising voluntary organization to deal with health care problems on a local, regional, or state basis.

At the national level, the AMA has joined with the American Hospital Association, the Blue Cross and Blue Shield Associations, the Business Roundtable, the Health Insurance Association of America, and the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) to endorse the concept of voluntary coalitions. Members of the national groups have agreed also to encourage members and local affiliates to participate together in such coalitions.

For the AMA, supporting the development of health care coalitions is a natural extension of its activities over the past three years in developing contacts at the national level with business and industry groups. The AMA has also encouraged state and local medical groups to establish dialogues with businesses and industries in their areas to discuss common concerns about health care delivery.

Within the federation of medicine, both state associations and county societies have pursued the initiation of medicine-business coalitions. About 46 medicine-business coalitions are in operation or in development stages. Others are being discussed. In many states where state associations have not established coalitions, they have initiated meetings with business, and frequently they have included other providers. Most state medical associations see their roles as catalysts for county-level coalitions, and many have sponsored programs and prepared technical assistance materials for county groups.

The AMA believes that these coalitions have the promise of being **the most effective mechanisms** for containing health care costs. Even though a local coalition of providers, insurers, business, and labor may not necessarily develop new cost-effectiveness ideas, it can create a better base of support for implementation of effective programs. For example, the medical community has long supported such policies as the elimination of nonemergency, weekend hospital admissions; increased preadmission testing; and greater use of outpatient services, such as ambulatory surgical centers, when medically appropriate. Endorsement of these policies and cooperative action by employers who furnish health insurance and by labor unions who bargain for benefits can make implementation of these policies a reality.

The AMA believes it is imperative that health care coalitions have physician participation so that primary emphasis is given to **quality** and **availability** of medical care and **access** to it, as well as to cost effectiveness and cost containment.

To help medical societies form coalitions or participate effectively in existing ones, the AMA has resource materials and other aid available. We in organized medicine must participate. **Now** is the time for medical societies to enlarge their leadership role and show the way.

Such leadership requires your support. The larger our membership (now 232,000) the greater our influence, and our strength as the only representative for all of medicine.

For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196.

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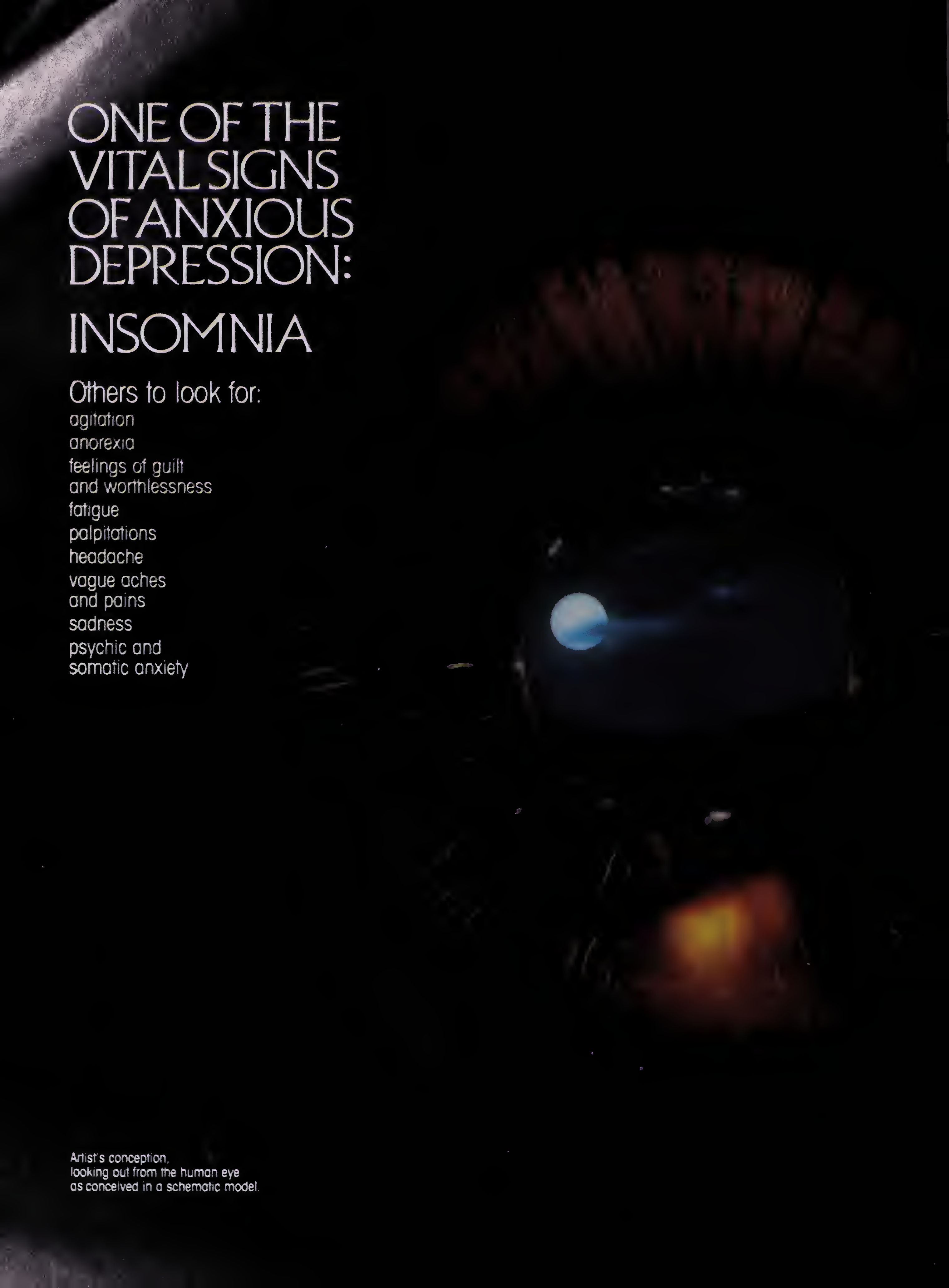

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Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved Contraindicated during acute recovery phase following myocardial infarction

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e g   operating machinery, driving)

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients Periodic liver function tests and blood counts are recommended during prolonged treatment Amitriptyline component may block action of guanethidine or similar antihypertensives Concomitant use with other psychotropic drugs has not been evaluated sedative effects may be additive Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects

Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs

Cardiovascular Hypotension, hypertension, tachycardia, palpitations, myocardial infarction arrhythmias, heart block, stroke

Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido

Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns

Anticholinergic Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract

Allergic Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus

Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura thrombocytopenia

Gastrointestinal Nausea epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue

Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels

Other Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling

Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment

Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h s* dose may suffice for some patients Lower dosages are recommended for the elderly

Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required

Limbitrol 5-12 5, initial dosage at three to four tablets daily in divided doses, for patients who do not tolerate higher doses

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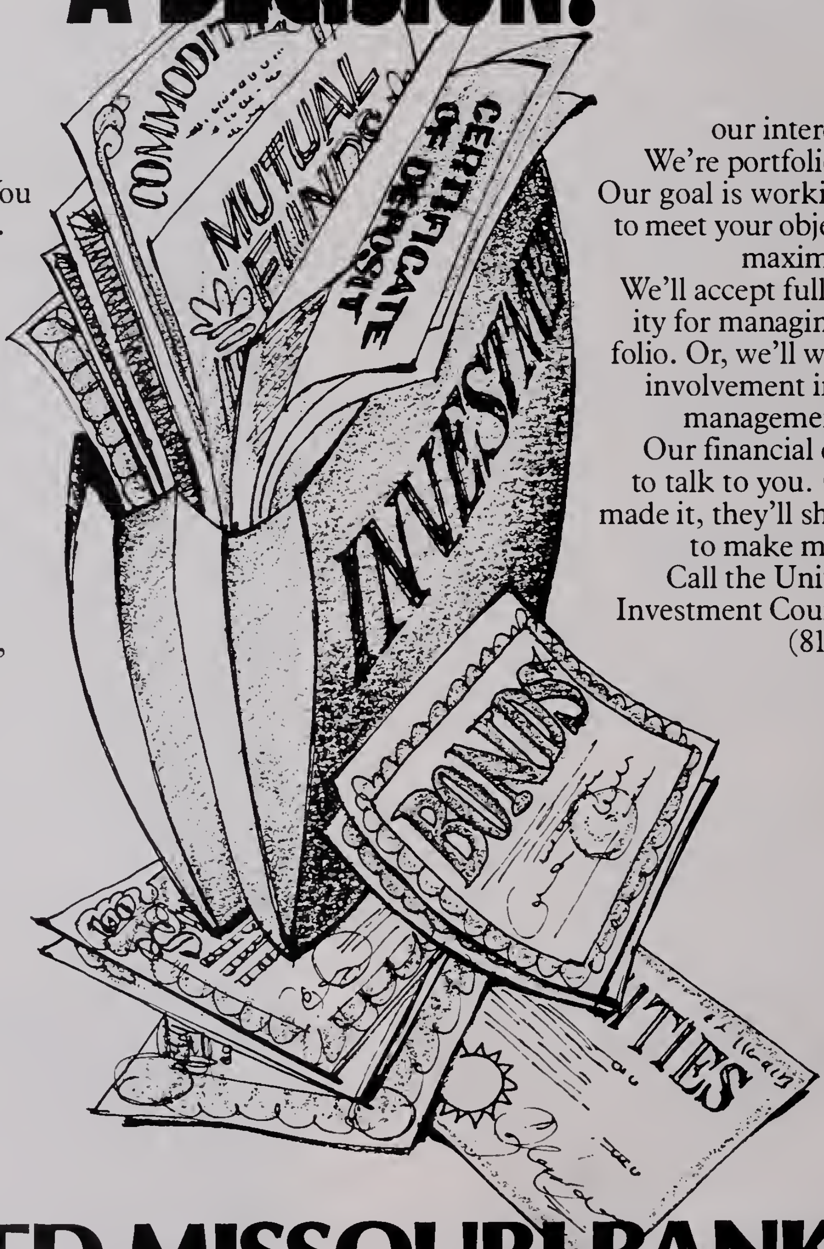

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- **Conclusion:** when added to a thiazide diuretic, reserpine was effective in a larger percentage of patients (88%) than was propranolol (81%)!

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- More than 10,000 patients studied
- Conducted at 14 centers over 5 years
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Please see references and brief summary of prescribing information on adjacent page.

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Brief Summary of Prescribing Information (12) 10/27/78
For complete information consult Official Package Circular.

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PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS

Hydroflumethiazide—Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine—Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

The usual adult dose of Salutensin is one tablet once or twice daily. If a smaller amount of thiazide diuretic is desired, Salutensin-Demi, one tablet once or twice daily can be given.

SUPPLIED

Bottles of 10 and 1000 scored tablets.

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Photo-Comment by James W. Clawson, M.D., Springfield

Absurdity: Trying to solve king-size problems with pawn-size ideas, meretricious labels and bureaucratic fiat.

Editor's Corner

THAT'S THE PITCH

Whenever a physician runs out of other matters to think about, he may on occasion pause to reflect on the number of medical journals that come through the mail. Most of us have long ago learned to slide some of the lesser publications quickly into the nearest round container, but there still seem to be more than enough monthlies to keep a corner of the desk stacked many-old-issues deep. If the pile isn't too high, patients may be impressed with the quality of medical reading the doctor is pursuing, judging by the erudite journal names on the covers. Of course, once the pile becomes too tall, visitors may be more struck with the idea that the old doc isn't keeping up with his reading any more. One then has two choices: place a casette with teaching tapes on prominent display as a cover-up, or merely pitch the whole pile into the wastebasket and start over.

In the good old days of medical publications, and not that many years ago, a comparatively few magazines sufficed. One referred wisely to the "green journal" or the "gray journal" in medical small talk, and colleagues immediately knew of whence the speaker spoke. Now, with the plethora of journals, medical banter would have to be extended to quote from the "Heliotrope Quarterly" or the "Mauve Monthly."

All of the above leads up to an obvious question: What is the role of the 35 state medical journals in the grand scheme of medical publications? The odds are obviously against the original publication of any great scientific breakthrough in MISSOURI MEDICINE (the White Journal?). Still, good and readable articles have appeared within these pages and, hopefully, will continue to do so. The several articles in this issue from the University of Missouri School of Medicine at Columbia are examples. However, this magazine seems to have a more important function to serve. Missouri is a large and diverse state sociologically, geographically and medically. St. Louis looks east; Kansas City looks west. North Missouri grows corn like Iowa; the bootheel leans toward Memphis. Ozarkers classically keep to themselves; only the center of the state seems at times to be "Missouri."

If this journal, besides featuring medical articles primarily by Missouri physicians, can serve to help unify the thinking of the physicians of the State, then its existence seems justified. Information on newer services offered by Missouri physicians at various hospitals and medical centers over the state is worthwhile — Boston and Houston aren't entirely "where it's at" medically. Missouri now has a number of specialty organizations whose activities can be featured in these pages. The Missouri State Medical Association keeps us abreast of its actions in the yellow insert.

That's the pitch. The next time the white journal with the squares on front lands on your desk, give it a glance or two. There should be something in it for you.

JORDAN W. BURKEY, M.D.

HYPERTENSION:

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RESERPINE?
INDERAL? COUNTLESS THOUSANDS WOULD BE BETTER OFF WITH

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INDERAL blocks beta-receptor sites *in the heart* to reduce heart rate and cardiac output—reducing cardiac work load—sparing an overburdened heart.

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INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

*Please see following page for Brief Summary of Prescribing Information.

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BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in 1) bronchial asthma 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL s negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol s potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol However such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS, EMPHYSEMA) INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia congestive heart failure intensification of AV block hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia visual disturbances hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea vomiting epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED

BRADYCARDIA—ADMINISTER ATROPINE (0 25 to 1 0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE DIGITALIZATION AND DIURETICS

HYPOTENSION—VASOPRESSORS, *e g* LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE

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No 462—Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 464 Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 468 Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10

Reference: 1 Freis, E D Hypertension (Suppl. II) *3* 230 (Nov-Dec) 1981 **7997/482**

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ARSHAD HUSAIN, M.D. *and*
ALI AHMAD, M.D., *Columbia*

Sexual Abuse of Children

Diagnosis and Treatment

SEXUAL ABUSE of children is increasingly encountered by health professionals. Current medical literature is replete with data indicating its frequency and its possible deleterious effects on the emotional development of the child.[1-7]

However, the sexual abuse of children is not a recent phenomenon. Examples can be found in ancient Greece where boys and girls were forced into sexual practices with adults.

In this report, we discuss clinical aspects of sexual abuse that include diagnostic methods and treatment approaches. We also report findings of our study of young female patients who were admitted to a psychiatric facility with emotional and behavior problems and a history of sexual abuse.

DEFINITION OF SEXUAL ABUSE

The U. S. National Center on Child Abuse and Neglect (NCCAN) defines sexual abuse as "an act perpetrated on a child by an adult or significantly older person with the intent to sexually stimulate that child and/or to sexually satisfy the aggressor."[8]

Some authors have used milder terms than "abuse," based on the observation that "children are not always the passive victims of adults." For example, Brant *et al*[9] prefer the term "sexual misuse" and suggest that the whole family is inflicted psychopathically. Others[10] have used the term "sexual exploitation" and view incest as the "more insidious, collusive, secretive and chronically pervasive form of molestation."

INCIDENCE OF SEXUAL ABUSE

The National Center on Child Abuse and Neglect has estimated that at least 100,000 cases of sexual abuse occur each year.[8] Other authorities consider 250,000 to be a conservative estimate. Woodbury *et al*[11] conducted a national survey and concluded that 5% to 15% of the population is involved.

Among the psychiatric population, Rosenfeld[12] reported that six (33%) of (his) 18 consecutive female private patients admitted to incest during childhood. Our study of 437 consecutive female patients admitted to an adolescent psychiatric unit in Mid-Missouri area revealed that 100 (22.9%) reported a history of sexual abuse.

Sexual abusers are found in all walks of life. Adults perpetrating sexual abuse may include "judges, ministers, university professors, doctors, teachers, skilled workers, white collar workers, farmers and unskilled laborers."[13]

Persons who have been abused sexually as children also come from all walks of life. Among 412 university freshman and sophomores, 17% reported having experienced some type of physical contact of a sexual nature during childhood. Most of the contacts were by persons related to them by blood or marriage.[1]

Yet, this is an underestimation of the problem. According to Justice and Justice,[14] the incidence of sexual abuse is many times greater than that of physical abuse. They give the following reasons for under-reporting:

1. The taboo against talking about it.
2. The refusal by physicians, clergy, relatives and neighbors who may be aware of sexual abuse going on in the family to report it or become involved.
3. The laws in almost half of the states fail to specify sexual abuse as one of the forms of abuse of children that must be reported.
4. The fiction that only poor and pathological persons engage in sexual abuse.
5. The attitude that nothing can be done to prevent it from occurring or to rehabilitate families if it does occur.

OUR STUDY

Method

We used the National Center on Child Abuse and Neglect (NCCAN) definition of sexual abuse for this study. All the female adolescent patients admitted to a psychiatric facility in the Mid-Missouri area were questioned about possible sexual abuse as a part of their interview. Patients' mothers and, when applicable, workers of protective agencies such as those from the Division of Family Services were also questioned to confirm reports.

Findings

Of 437 girls admitted, 100 (22.9%) admitted to being sexually abused during early childhood. Further analysis of data revealed that the most common perpetrator of sexual abuse was a relative (61%). A stranger was involved in only 20% of cases (Table 1). Among the relatives, the natural father was the most common sexual abuser (21%), followed by a stepfather (20%) and a brother (12%).

TABLE 1
SEXUAL ABUSERS OF 100 GIRLS

Relatives	*No.*	*Non Relatives*	*No.*
Father	21	Stranger	20
Stepfather	20	Boyfriend	6
Brother	12	Friend of the family	
Brother-in-law	3		6
Grandfather	1	Foster father	2
Uncle	2	Babysitter	1
Half-brother	1	Physician	1
Adoptive father	1	Others	2
Total	61		39

Detection and Assessment

There is no litmus test for diagnosing intrafamiliar sexual abuse. However, one must begin with a willingness to entertain the possibility that the condition may exist. The reluctance to accept a child's report that she or he is being sexually abused may emerge from the belief that the child is fantasizing. However, the clinical data do not support this notion. Most of the workers who have studied sexual abuse in children believe that a child reporting such acts is telling the truth. Henry Giaretto[15] describes the progression of sexual liaison between the father and daughter in the following way:

> "The average victim of sexual abuse is 10 years old when her father begins his sexual advances. She has always been close to her dad and finds fondling strange but pleasurable. Slowly the sex play becomes more sophisticated as it progresses to mutual oral copulation and at puberty to intercourse. Meetings which were excitingly secretive now become fugitive and anxiety ridden. As she enters adolescence, the tension within her becomes unbearable.
>
> "In this stressed and bewildered family structure, she is the most bewildered. The familiar father has put on a strange mask of lover and his daughter never knows which role (father or lover) he will play. Her mother too becomes unpredictable. At one moment, all seems usual and, at another, she sends subtle messages that can come only from a rival.
>
> "The child's relationships with her siblings are adversely affected as they become aware that she has a special relationship with her father. Her relationship with her peers are also adversely affected as the abuser tries to inhibit her from developing close relationships that might lead to disclosure and his jealousy militates against the development of normal heterosexual relationships during the adolescence period. Within this span of events, numerous crises emerge when the disclosure of sexual abuse may become imminent. For example, the child may share her secret with a friend or trusted adult despite pressure and threats from the abuser. The child may also tell her mother in a moment of angry betrayal when father refuses to grant her a special privilege. Occasionally, the mother comes home unex-

pectedly and witnesses a part of the act. Frequently, the family member notices that the child makes a deliberate effort to avoid being alone with the father."

Younger children who are victims of sexual abuse at times demonstrate a degree of sophistication in their imitative sexual play that is beyond any reasonable child-like sexual exploration.

There are some covert signs that should induce a clinician to inquire further. Children complaining of somatic symptoms with no obvious organic causes should be questioned about the possibility of sexual abuse. Similarly, a child who has difficulties in school, poor peer relationships and symptoms of emotional turmoil, such as sleep difficulties, nightmares and phobias, should alert the physician to the possibility of sexual abuse, particularly when these symptoms represent a regression from better functioning.

Veneral disease in a child should always be suspected to be a consequence of sexual abuse. In the first two months of a survey of newborn infants in the Well Baby Clinic, 17 babies had gonorrhea as a result of sexual abuse.[6] Genital irritation, vaginal infections and mild traumas readily attributed to bubble bath and falling on a hard object in the straddle position are also frequently misdiagnosed in these abused children.

Any of these indicators of sexual abuse should be pursued in an orderly and sensitive way by obtaining a direct social and developmental history. Areas such as a special relationship, onset of symptoms or regressions, details about sleeping and child care arrangements, assessment of the adequacy of adult protectiveness, and the possible endangerment or involvement of siblings must all be evaluated.

The child should always be interviewed apart from the family. These children will not talk about their sexual involvement with a family member present unless a safe and neutral environment is provided. Nurses and physicians are often initially skillful in soliciting this information. Helping children to adjust to a strange and anxiety-ridden setting as quickly as possible while playing with the stethoscope, tongue blades, puppets and dolls can be advantageous. Once an alliance is formed, they can guide these activities quickly toward the areas in which information is being sought. A statement such as, "Sometimes adults do things to children like touch them on the private parts of the body down there. Will you tell me if someone has been touching you down there?", will give amazing results.

Sexual abuse of children is more prevalent than generally realized and is increasing. Both the victims and the abusers are from all walks of life and the latter include "judges, ministers, university professors, doctors, teachers, skilled workers, white collar workers, farmers and unskilled laborers."[13] The willingness of the physician to consider the possibility of sexual abuse is the most important step toward making a diagnosis. The authors discuss clinical aspects of sexual abuse and discuss diagnostic methods and treatment.

Dr. Husain is Associate Professor and Dr. Ahmad is Assistant Professor, Department of Psychiatry, University of Missouri Medical Sciences Center.

A medical examination, including the gynecological examination, is very important both diagnostically and to provide medical and gynecological care. These children generally tolerate the procedure quite well and are often relieved to hear the doctor's assurance that everything down there is normal. Usually, visual examination of the genitalia portion utilizing a small swab for cultures suffices for the genital portion of the medical examination.

Assessment of False Reporting

Issues of physical and sexual abuse are being discussed more openly. Children and adults are becoming more aware of the laws to ensure child protection from such abuse. As a result, some parents and, rarely, adolescent children have used false reporting for ulterior motives. A careful social history, assessment of the child's previous and present adjustment, and investigation into motivational factors usually provide enough data to form a reasonably accurate impression of the situation. For example, in one case of alleged sexual abuse, the reporting parent was involved in a custody suit with the mother and had coached the daughter to accuse the stepfather of sexual abuse "to strengthen his case for custody." In another case, a teenage girl had accused her rigid, disciplinarian father of sexually molesting her. On further inquiry, it was found that the girl tended to be antisocial, was taking drugs and was sexually promiscous. She had previously reported her boyfriend for raping her. She later admitted to false reporting and expressed her motivation as "getting back" at her father for not allowing her certain privileges.

Treatment

The disclosure of intrafamiliar sexual abuse creates a crisis for the whole family and should be considered a psychiatric emergency. Immediate and appropriate intervention by a multidisciplinary team that includes a physician, family service social worker and juvenile officer is of utmost importance. Consideration should be given to the needs of the victim and the family.

The immediate goal of the intervention is to protect the child. However, the long-term goals of the treatment are to reintegrate the family. The following steps are suggested:[15]

1. Remove the child from the parents' home and either admit her to a medical or psychiatric ward or place her in a foster home.
2. Firmly instruct the father not to make any contact with his family
3. Reintegrate the family by taking the following steps:
    a. Reconcile the mother-daughter relationship. The daughter generally feels that she has betrayed the mother and the family by submitting to sexual advances of her father and by not confiding in her mother earlier. She also feels remorseful for getting the father in trouble. The mother also has mixed feelings toward the daughter and feels "let down" by her.
    b. Initially, the child and the mother are treated separately. During individual therapy, they should be helped to deal with their mixed feelings of guilt, shame and anger. The child should be convinced that she, indeed, was a victim of inept parenting and of a poor marital relationship. The mother should be helped to understand the dynamics of the sexual liaison between her husband and daughter and the role she might have played in inadvertently promoting such relationship.
    c. At a future time, the mother and daughter should be treated together with the goal of rebuilding the family around the essential mother-daughter core. The child at this stage of therapy must hear from her mother about the parental responsibility for the sexual activity.
    d. The father should also be involved in separate treatment. The goal for his therapy should be to help him explore problems caused by his behavior and to develop awareness of the factors responsible for promoting the sexual abuse. He should be able to accept full responsibility for his sexual liaison with his daughter and should be able to communicate that to her.
    e. The next step is to involve both parents in marital therapy when they should assess their relationship, mutual expectations and future commitment to the marriage and to each other.
    f. When these steps are successfully completed, only then should the reunion of daughter and mother, and later the father, take place.

Conclusion

Sexual abuse of children is more common than previously known. In our study of 437 consecutive admissions to an adolescent psychiatric unit, 100 girls reported sexual abuse. In 61% of cases, the perpetrator was a relative. Only in 20% was the sexual abuse committed by a total stranger. These findings support the previous suggestions that "sexual abuse begins at home."

The diagnosis of sexual abuse is not always easy. However, the willingness of the physician to consider its possibility is the most important step toward making a diagnosis of sexual abuse.

The primary goal of treatment is to ultimately integrate the family. This should be achieved by initially rebuilding trust between mother and daughter.

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Treatment of Chronic Psoriasis Vulgaris

THREE NEW METHODS of treating severe psoriasis have been introduced to the medical community during the past decade. The most utilized, psoralen assisted ultraviolet light-A therapy (PUVA), has been used in thousands of patients nationwide with great success. Oral retinoids, chemical derivatives of vitamin A, are being evaluated in a host of dermatologic disorders of which psoriasis is one. Peritoneal dialysis for severe recalcitrant psoriasis is now undergoing double-blind trials to determine its safety and efficacy. During this same period, some of the established methods of treatment have been refined, improved and partially explained.

Psoriasis is a common, chronic skin disorder with a prevalence of 5.5 cases per 1,000 people in the United States.[1] Its severity ranges from very mild cases, which are never brought to medical attention, to total erythroderms that require intensive in-hospital management. Psoriasis can be a severe psychological, emotional and socioeconomic disaster for the afflicted patient.

This is a brief review of the etiology and disease process of psoriasis. We will then concentrate on a review of the current treatment modalities being used in the management of psoriasis.

PATHOGENESIS

A multifactorial inheritance pattern may be at work in this disorder of the epidermis. Several HLA antigens have been found to be more prevalent in psoriatics than in unafflicted persons.[2, 3] Cutaneous trauma or an infection with streptococcus pyogenes often may precede the onset of psoriasis.[4]

Studies of the psoriatic lesion have shown that this disease consists of epidermal hyperplasia. The number of basal cell mitoses is increased in the lesion. A psoriatic epidermal basal cell reproduces about every 38 hours,[5] whereas a normal basal cell takes more than 152 hours to reproduce.[6] The epidermal turnover time, which is the time it takes a newly formed keratinocyte to transverse the epidermis and be exfoliated, is two[7] to five days[8] for psoriasis compared to 25 to 30 days for normal skin. An intriguing speculation is that in psoriatics, the chemical inhibitor, which is normally present to "turn off" cellular reproduction, is somehow absent or defective.[9]

CLINICAL MANIFESTATIONS

The chronic plaque-type psoriasis usually has its onset in childhood or early adult life. The initial lesions are most often small erythematous papules that gradually enlarge into elevated erythematous plaques covered with a fairly thick, silver-white scale. Picking the scale from a lesion may reveal pinpoint bleeding sites (Auspitz sign), a characteristic of psoriasis. The lesions most commonly involve the elbows, knees, sacrum and scalp, but can involve any skin surface. A large percentage of patients show pits in the fingernails, onycholysis (separation of the nail plate from the nail bed) and a buildup of subungual keratin debris. Some patients have only the disease of the nails.

Less common forms of psoriasis include acute guttate psoriasis that often follows a streptococcal infection, generalized pustular psoriasis and pustular psoriasis of the palms and soles. Approximately 7% of psoriatics have a sero-negative arthropathy.[10] This arthritis can produce mutilating changes in the hands and feet.

TREATMENT

The options for treatment in chronic plaque-type psoriasis range from simple, benign topical medications to potentially dangerous systemic

Psoriasis can be a socially and economically devastating skin disorder. The authors report three new investigative treatments that have been successful in psoriatic therapy and review the treatment options and their adverse reactions.

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TABLE 1
TYPES OF THERAPY FOR PSORIASIS

- Mild disease:
  - Corticosteroids:
    - Topical
    - Local injections
  - Coal tar
  - Anthralin
  - Ultraviolet light (UVB)
- Moderate-severe disease:
  - Goeckerman therapy
  - PUVA
- Severe disease:
  - Methotrexate
  - Hydroxyurea
  - Oral retinoids
  - Peritoneal dialysis
  - PUVA combined with other therapies

cytotoxic agents (Table 1). The choice of therapy depends on the severity of the disease, the doctor's experience or skill, the availability of treatment facilities and the patient's expectations. Patients with mild-to-moderate disease do not necessarily need a dermatologist's supervision. However, a dermatologist should care for those patients with severe disease whose course may be rapid and debilitating and who may need more intensive and specialized treatment.

MILD PSORIASIS

Psoriasis that involves very little of the body surface area usually can be controlled with the topical application of various substances or the intralesional injection of corticosteroids.

The potent topical steroids (class I-II) usually are very effective in decreasing the amount of erythema and scale seen in psoriatic lesions. Occlusion at night with polyethylene wrap enhances this effect. Ointments are more effective than creams or lotions.

Topical steroids are not without their drawbacks.[11] Tachyphylaxis, a term that describes the tendency of the disease to eventually become resistant to a particular steroid, is not uncommon. This necessitates substituting another steroid preparation or changing therapies altogether. Skin atrophy is a well-known complication of potent topical steroids, especially in intertriginous areas and in areas treated too aggressively with occlusion. If used on the face, a rosacea-like eruption may develop after several weeks. Finally, the cost of these preparations may prohibit their use.

Solitary small, resistant plaques of psoriasis can be successfully treated with intralesional triamcinolone. This medicine should be diluted to a 2.5 mg to 5 mg per cc concentration before injecting into the lesion with a syringe or dermajet.

Crude coal tar has long been known to be beneficial in psoriasis. Its effectiveness is enhanced if used in combination with ultraviolet light, but it can be effective when used alone. Crude coal tar can be mixed in a 1% to 5% concentration in a cream base and should be gently applied to the lesions with the "grain" of the hair once to twice daily. The disadvantages of crude coal tar include the odor, the mess, its propensity to stain clothes, and the possibility of its causing a folliculitis. Newer tar preparations now available are more elegant and do not have as many drawbacks. However, the therapeutic effectiveness of the new tars is probably less.[12]

Anthralin, or dithranol, has been used for many years to treat psoriasis. In 1954, Ingram introduced his technique of using gradually increasing concentrations (0.1% to 0.8%) of an anthralin paste in conjunction with a tar bath and ultraviolet light.[13] The paste must be applied only to the lesions once daily. The mean treatment time is three weeks and this usually must be done on an inpatient basis. The disadvantages include skin irritation and staining of skin, hair, nails, bedding and clothes. More recently, low strength anthralin (.01% to 0.05%) has been shown to be effective if external mechanical trauma is avoided.[14] These low concentrations do not cause staining or skin irritation. and may have a place in outpatient psoriasis management.

MODERATE TO SEVERE PSORIASIS

Goeckerman first reported his use of ultraviolet light and topical coal tar in 1925.[15] Since that time, his method has undergone numerous variations and refinements.[16, 17] Presently, the "Goeckerman" regimen involves applying crude coal tar in petrolatum (1% to 5%) to the total skin surface for at least two hours (often overnight). This tar film is removed later in a tar bath. The patient is then carefully irradiated by using an ultraviolet light source that produces light in 290 nm to 320 nm wavelengths (UVB). Ultraviolet irradiation causes a delayed erythema of the skin which reaches its peak at six to 12 hours after exposure. The least amount of ultraviolet radiation needed to cause this change is called the minimal erythema dose (MED). The initial exposure in therapy may be only one MED, and this dose should be increased daily until (by the end of the Goeckerman therapy) between ten and 15 MEDs exposures are given daily. Careful monitoring of the UV-light dose is required to avoid burning that can worsen the psoriatic condition.

Clearing of the skin disease usually is observed during the third week but may be delayed as long as five to six weeks. Remissions after therapy may last from weeks to months or even years. Recent studies indicate that a petrolatum coating may be almost as effective as crude coal tar for some patients.[18] This is still controversial. If true, however, it would certainly alleviate the odor and mess involved in the present regimen. Rest also may be important in therapy.

The Goeckerman regimen usually is carried out on an inpatient basis because of the need for supervision, the UV-light equipment and the time involved for the treatments. In certain urban areas of the country, psoriasis day care centers have successfully been established to decrease the cost of treatment, to decrease the number of disability days or days lost from work and to minimize the disruption in the patient's life.[19]

A new outpatient treatment that requires no topical applications was described by Parrish, Fitzpatrick *et al* in 1974.[20] This is a photochemotherapy using psoralens and long wave ultraviolet light (PUVA). It is still being investigated in centers throughout the United States. Currently, 8-methoxypsoralen (8-MOP) is the most widely used of the psoralen derivatives. One to three hours after the oral ingestion of 8-MOP, the concentration of the drug in skin is at the peak. The patient is then exposed to long wave ultraviolet light (320-400 nm-UVA) for a measured length of time.

The psoralens interact strongly with the nucleic acids in the epidermal cells. The ultraviolet light causes cross-linking between two pyrimidine bases on opposite strands of the double stranded DNA as well as monofunctional single strand photoadducts with thymine bases. These changes presumably will interfere with DNA synthesis, slow down cell replication and cause clinical improvement.

Because the peak erythema is not seen until 48 to 72 hours later, treatments can be given only two to three times weekly. Most reports indicate either significant improvement or complete clearing in 85% to 90% of selected patients after 20 to 25 treatments.[21] Psoriasis will recur quickly when PUVA is stopped. Maintenance PUVA treatment, therefore, is necessary and the schedules vary from one or two treatments per week to as few as one per month.[22] As with all other forms of therapy, relapses can be expected in most patients.

In spite of its advantage of being simple, relatively inexpensive, tidy and convenient for an outpatient, PUVA also has its disadvantages. 8-MOP is incorporated into the lens of the eye. Studies in rats have shown cataract formation. An increased incidence of human cataracts has not been reported as yet, but patients should wear special eye glasses and sun glasses that block all UVA light.[22] Stern *et al* found that psoriatic patients with fair skin, previous skin cancers and previous exposure to ionizing radiation for their psoriasis were especially at risk for developing new skin cancers after PUVA therapy. They also found a higher percentage of squamous cell carcinomas as opposed to basal cell carcinomas.[23] All of these risks must be considered when deciding on PUVA therapy for a given patient.

SEVERE PSORIASIS

Most patients with psoriasis have mild disease and can be managed effectively with the above methods. Unfortunately, there are those who worsen and remain recalcitrant to ordinary treatment and need more aggressive therapy. These patients should have expert dermatologic care.

Methotrexate has been used in psoriasis therapy for a number of years. A folic acid antagonist, methotrexate inhibits DNA synthesis. Methotrexate should be considered for use only for extensive recalcitrant psoriasis, cosmetically disfiguring disease, and in physically or economically disabling disease.

A national committee of experts has established excellent guidelines for the use of methotrexate in psoriasis.[24] The usual patient receives orally or parenterally from 10 to 30 mg of methotrexate one time per week, or the medication is divided into three doses given 12 hours apart one day per week. The major side effects of this potent drug include acute bone marrow suppression and gradual liver fibrosis and cirrhosis. A thorough history, physical examination and laboratory evaluation must be conducted for each patient before beginning therapy and repeated periodically while the patient is being treated. Liver biopsies are sometimes indicated in the ongoing evaluation of a patient on methotrexate. Alcohol consumption must be strictly limited to decrease the possibility of hepatotoxicity.

The usual goal of methotrexate therapy is not to achieve complete clearing of severe psoriasis but to remove the patient's disability at the lowest possible dosage. Long rest periods without methotrexate are desirable. After methotrexate use, the disease may be more easily controlled with topical therapy. A maximal lifetime dose of 2 to 4 gm is advised, so this drug should be rationed expertly.[24, 25]

Hydroxyurea is an antimetabolite that also inhibits DNA synthesis. It, too, has been used in psoriasis therapy but with less satisfactory results than with methotrexate therapy. Significant clearing is usually not achieved and patients rebound quickly after discontinuing its use.[12] A leukopenia is common, but hepatic cirrhosis has not been reported.[26]

Oral retinoids, synthetic derivatives of vitamin A, have been investigated in Europe and the United States for use for several dermatologic disorders. Their effect in psoriasis has been variable. The best results have been attained in patients with cases of acute pustular psoriasis and in some with psoriatic erythroderms. Chronic plaque psoriasis occasionally has responded to this agent but not as well or reliably as had been hoped. Relapses are often prompt when the medication is discontinued. However, there has been good success in combining oral retinoids with other conventional treatments, thus mutually enhancing their effects.[27] Early side effects include cheilitis, hair thinning, dryness of mucous membranes, blepharoconjunctivitis and a potential for hepatotoxicity.[28] Long-term side effects are not well understood. Studies and evaluation of this new drug are continuing.

In 1977, reports appeared showing clearing of psoriasis after dialysis in patients with both psoriasis and chronic renal failure. In 1978, Twardowski, Nolph and Anderson of the University of Missouri-Columbia, Medical Services Center, reported on the first three disabled psoriatic patients with normal renal function to undergo experimental peritoneal dialysis treatment for psoriasis.[29] Two of those three had good long-term responses. Since then, several medical centers have begun evaluation of this method for treating severe and recalcitrant psoriasis.

Recently, the first double-blind study using this method was completed at the University of Missouri-Columbia. Complete and persistent clearing was found in about 10% of the patients, good response in about 50% to 67%, and no satisfactory response in about 33%.[30]

Remission lengths have not yet been determined. Peritoneal dialysis is not without risk because of possible complications that include peritonitis and bowel wall perforation from catheter insertion. Long-term side effects of dialysis may be none or very few, thereby comparing favorably with other therapies. Peritoneal dialysis for psoriasis is still in its early experimental stages, but it may be a useful treatment in the future for severely disabled psoriatic patients whose disease cannot be controlled with simpler treatments.

Summary

Psoriasis remains a chronic unsightly skin disorder without a reliable "cure." Both patients and physicians often give up hope after dealing unsuccessfully with this problem for years. A more thorough and aggressive plan often will succeed in these situations. Better mixing of modalities of treatment may be useful. Several new treatment modalities are now available for these patients, and ongoing research is developing newer and, possibly, more effective future treatment options.

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Polymyalgia Rheumatica and Temporal Arteritis

POLYMYALGIA RHEUMATICA, although only recently recognized in the United States as an entity, is one of the more common rheumatic diseases of the aged.[1] It is frequently associated with temporal arteritis. For this reason, the two diseases will be considered together.

Understanding of each of these diseases and their relationship is still in a controversial stage. Some clinicians consider all patients with polymyalgia rheumatica as having an underlying temporal arteritis. That evidence is inconclusive.[2] Furthermore, specific tests for the diagnosis of polymyalgia rheumatica are lacking. Following a brief consideration of the historical background of temporal arteritis and polymyalgia rheumatica, polymyalgia rheumatica and temporal arteritis will be considered individually. In the latter part of this review, some of the controversial interrelationships of these two diseases will be addressed.

It is crucial to recognize those patients with polymyalgia rheumatica and coexistent temporal arteritis because high-dose corticosteroid therapy is indicated in such patients, whereas nonsteroidal antiinflammatory medication or low-dose corticosteroid therapy will suffice in patients with polymyalgia rheumatica without temporal arteritis.

HISTORY

The reports in Table 1[3] encompass the years between 1888 and 1963 and provide some understanding of the historical inter-relationships of polymyalgia rheumatica and temporal arteritis, first described as individual diseases and finally as coexistent diseases. Bruce, in 1888, labeled a condition consisting of severe, curable, widespread muscle pain as "senile rheumatic gout." This was probably the earliest description of polymyalgia rheumatica.

Two years later, Jonathan Hutchison, founder and editor of the *Archives of Surgery,* described the case history of an old man, the father of a London hospital beadle, who could not wear his hat because of markedly inflamed temporal arteries.[4] This was the first description of temporal arteritis. Temporal arteritis was brought to wide attention by Horton and his coworkers at the Mayo Clinic when they described two patients with biopsy-proven temporal arteritis.

Subsequent reports have emphasized the systemic nature of the disease, the involvement of large-and medium-sized arteries throughout the body and its frequent association with polymyalgia rheumatica. Barber first used the term "Polymyalgia Rheumatica" in 1957 and, in spite of the early awareness of temporal arteritis in the United States, the slow acceptance here of polymyalgia rheumatica as an entity is shown by the fact that the first U.S. report did not appear until 1963.

POLYMYALGIA RHEUMATICA

Polymyalgia rheumatica is now recognized in England as one of the most common rheumatic diseases in the elderly. In this age group, its prevalence in one English clinic[1] was estimated to be equal to that of gout and one half that of rheumatoid arthritis. Our incidence at the University of Missouri Health Sciences Center (UMHSC) is lower. Thirteen patients with polymyalgia rheumatica were hospitalized at UMHSC in the four-year period of 1975-1979. Polymyalgia rheumatica is a disease that occurs predominantly in white people. It affects women twice as frequently as men.

Polymyalgia rheumatica, a common rheumatic disease of the elderly reported relatively recently in the United States, is often associated with temporal arteritis. The author discusses these diseases, their relationship and therapy. He emphasizes the need to define and treat temporal arteritis rapidly because it commonly produces blindness.

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TABLE 1
HISTORY OF POLYMYALGIA RHEUMATICA (PR) AND TEMPORAL ARTERITIS (TA)

PR — "Senile Rheumatic Gout," Bruce	1888
TA — Jonathan Hutchison	1890
TA — (2 patients with biopsies), Horton *et al*	1932
TA — (Blindness), Jennings	1938
TA — (Systemic disease, aorta, its branches), Gilmour	1941
PR — "Secondary Fibrositis," Slocumb	1943
TA — (Cortisone treatment), Shick *et al*	1950
PR — "Polymyalgia Rheumatica," Barber	1957
TA — (Association with P.R. symptoms), Paulley, Hughes	1960
PR — (TA in asymptomatic temporal arteries), Alestig, Barr	1963
PR — (1st U.S. report of PR), Levey *et al*	1963

TABLE 2
DIAGNOSTIC CRITERIA FOR POLYMYALGIA RHEUMATICA

Age > 50
Pain and stiffness in at least two of the following areas:
- Neck
- Shoulder Girdle
- Pelvic Girdle

ESR > 40 mm/hr (Westergren)
Symptoms for at least one month

TABLE 3
DIFFERENTIAL DIAGNOSIS OF POLYMYALGIA RHEUMATICA

Inflammatory Rheumatic Diseases
(Rheumatoid Arthritis, Polymyositis, etc.)

Non-Inflammatory Rheumatic Diseases
(1°Fibrositis, Osteoarthritis, Psychogenic)

Infections (Viral, Infective Endocarditis)

Malignancies (Carcinoma, Myeloma)

Diagnostic criteria for polymyalgia rheumatica are shown in Table 2.[5, 6] Often the pain and stiffness are dramatic in onset and may be nearly incapacitating. The location of aching and stiffness in polymyalgia rheumatica is highly characteristic, typically occurring in the neck, shoulder girdle, pelvic girdle and thighs. In addition, systemic symptoms such as low-grade fever, night sweats, anorexia, malaise and weight loss are a prominent part of polymyalgia rheumatica. Small knee joint effusions are common.[7, 8]

What does one observe when entering the room of a patient with classical polymyalgia rheumatica? Typically, one finds a patient who has been painfully stiff all morning and who is very reluctant to sit up on the side of the bed or get out of a chair for fear of aggravating the pain. The patient has not been feeling well for weeks, having had a poor appetite, weight loss and a low-grade fever. Examination will usually reveal no real weakness, but the patient is hesitant to participate in muscle testing because of discomfort. The muscles and tendons of the shoulders, hips and neck are often tender and shoulder motion is commonly limited. However, major objective physical signs are largely lacking.[7, 8, 9] The finding of a strikingly high sedimentation rate in this clinical setting strongly suggests the diagnosis of polymyalgia rheumatica.

Differential Diagnosis of Polymyalgia Rheumatica

Many disease states may present with diffuse pains, stiffness and systemic symptoms mimicking polymyalgia rheumatica. The differential diagnosis of polymyalgia rheumatica can largely be classified in the four categories shown in Table 3.[9, 10] Other features of these diseases, including characteristic laboratory tests, help to distinguish them from polymyalgia rheumatica. The absence of an elevated sedimentation rate is particularly helpful in considering the noninflammatory rheumatic diseases.

Manifestations of Temporal Arteritis

Temporal arteritis (also known as cranial arteritis, giant cell arteritis and granulomatous arteritis) likewise affects almost exclusively individuals over age 50 and also has a strong predilection for white people. Its annual incidence is 17 per 100,000 population over 50 years old.[11]

The manifestations of temporal arteritis may be divided into common, less common and rare. The common manifestations are polymyalgia rheumatica, headache, blindness, anemia and fever. Less common manifestations are claudication of the jaw or extremities, tongue pain, dysphagia, cerebral symptoms (aphasia, vertigo, depression, psychosis, stupor, coma and stroke), diplopia, paresthesias and brachial paralysis. Rare manifestations are myocardial infarction, scalp necrosis and gangrene of the tongue.[10, 12] Systemic symptoms are prominent features. At times, the temperature exceeds 103F, anemia may be pronounced, and weight loss may be striking. Moreover, the systemic symptoms may predominate and the cranial arteries may be asymptomatic. On occasion, biopsy of an asymptomatic temporal artery has provided the explanation for a fever of unknown cause in an elderly individual.[13] The fever may be intermittent or sustained and spikes may be associated with shaking chills. It may be prominent early in the disease and spontaneously subside.[14]

Arteries Involved in Temporal Arteritis

Although temporal arteries are usually the most obviously symptomatic vessels, many other cranial vessels may be involved as well as large arteries throughout the body. The cranial arteries particularly accessible to physical examination are branches of the external carotid artery (Fig. 1). These include the frontal and parietal divisions of the temporal artery, the posterior auricular artery, the occipital artery and the facial artery.[15, 16] Any of these vessels may be nodular, tender and have diminished pulsations. The internal carotid artery gives off the ophthalmic artery branch which provides blood supply to the eye by way of the posterior ciliary artery and the central retinal artery. Involvement of these ocular branches may lead to partial or complete blindness.

The ocular involvement in 175 patients with temporal arteritis seen by 1960 at the Mayo Clinic was reviewed by Hollenhorst *et al.*[16] Sixty-eight of these 175 patients had no ocular signs or symptoms associated with temporal arteritis. Seventy-three patients permanently lost all or part of their vision. Thirty-four patients gave a history of transient visual loss in one or both eyes and half of these patients subsequently developed permanent visual loss. These are included in the group of 73 patients with permanent visual defects. Diplopia was noted by 22 patients, ten of whom had demonstrable lesions of the extraocular muscles. Six patients had cotton-wool exudates without ocular symptoms.

Loss of vision[16] results from diminished blood supply to the optic nerve or retina. Thus, the three ways the eyes may be affected are (1) ischemic optic neuritis, by far the most common, resulting from involvement of the posterior ciliary arteries, producing a swollen and/or pale optic disc; (2) ischemic retrobulbar neuritis, when loss of vision occurs without observable change in the retina or optic nerve; and (3) least commonly, occlusion of the central retinal artery, associated with pale ischemic edema of the retina and a cherry-red spot in the macula.

Pathology of Temporal Arteritis

The most important pathological findings in temporal arteritis are those obtained by biopsy of a temporal vessel. An adequate piece of vessel, 4 cm to 6 cm long if the vessel is asymptomatic, is removed.[9] Serial sections are needed because skip lesions exist in 28%.[17] If one side is negative on frozen section, one should biopsy a specimen from the opposite side. Superficial temporal arteriography may help to select the site for biopsy.[18] A biopsy of other cranial vessels may be done, but occasional injury to the nearby occipital nerve during occipital artery biopsy may produce pain lasting serveral months.[9] Table 4 lists the sequential pathology of temporal arteritis.[19]

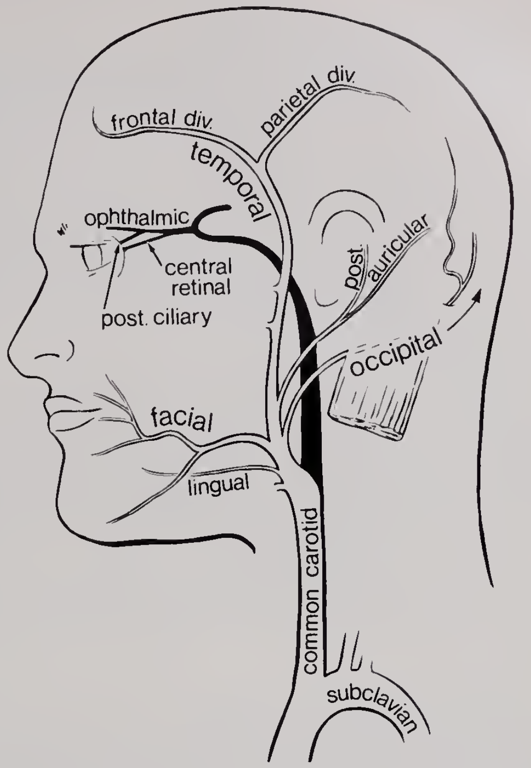

Fig. 1 Arteries involved in temporal arteritis.

Pathogenesis of Temporal Arteritis

The etiology of temporal arteritis is unknown. Infection has been considered but has not been proven. Although it is a disease of the elderly, the

TABLE 4
SEQUENTIAL PATHOLOGY OF TEMPORAL ARTERITIS

The changes are random and focal.
Infiltrate adjacent to internal elastic lamina with necrosis of smooth muscle cells.
Intimal thickening, palisading epithelioid cells, giant cells, destruction of internal elastic lamina.
Fibrotic obliteration and gross distortion of the lumen.

reasons remain unexplained.

However, some features of the disease may possibly relate to its pathogenesis. Familial aggregation has been reported in 12 pairs of first degree relatives with temporal arteritis, polymyalgia rheumatica, or both.[20, 21] To date, no consistent HLA antigen has been associated with the disease.[22] The internal elastic lamina may be important in the pathogenesis. It is altered early in the disease and macrophages and giant cells phagocytize pieces of it.[2, 4, 15]

Humoral immune responses are suggested by the finding of immunoglobulins closely applied to the disrupted internal elastic lamina and within adjacent macrophages[23] and by the recent finding of circulating immune complexes in giant cell arteritis and polymyalgia rheumatica.[24] The contribution of cellular immune responses, though an attractive possibility, has not been proven.[25, 26]

Laboratory Findings

In the consideration of laboratory findings in polymyalgia rheumatica and temporal arteritis, it becomes apparent that common, nonspecific abnormal results of certain laboratory tests are shared by polymyalgia rheumatica and temporal arteritis.[2, 6] First, there is usually a very high Westergren erythrocyte sedimentation rate, often exceeding 100 mm/hr. Second, a normochromic or hypochromic anemia which is corticosteroid responsive is often present. Third, the serum alpha-2 globulin and fibrinogen are frequently elevated. The serum alkaline phosphatase is elevated in about one fourth to more than one half of patients, probably due to cholestasis.[27] It reverts to normal with corticosteroid therapy. Platelet counts may be increased because of an increased rate of platelet production apparently in reaction to the inflammation present.[28-30] Equally important in these two diseases is the usual absence of certain laboratory abnormalities. The rheumatoid factor and fluorescent antinuclear antibody are negative or occur no more frequently than expected normally in this age group. Serum creatine phosphokinase (CPK) and aldolase values and electromyograms results are normal.[2] Results of muscle biopsy also are normal or show only type 2 muscle atrophy.[31] If synovial effusion is present, its characteristics are not that of marked inflammation.[6]

TABLE 5

KEY CHECKS FOR TEMPORAL ARTERITIS IN POLYMYALGIA RHEUMATICA

CAREFUL INQUIRY AND EXAMINATION
History: Headache, visual disturbances, jaw claudication, extremity claudication, asymmetrical Raynaud's.
Examination: Decreased vision, decreased visual fields. Optic disc pallor, edema, or atrophy. Tenderness, nodularity, decreased pulses of cranial vessels. Decreased extremity pulses, bruits, low and/or unequal blood pressure.
If very high erythrocyte sedimentation rate, marked anemia, high fever, consider temporal arteritis.

Joint scans performed with technetium pertechnetate showed abnormalities in 24/25 patients with polymyalgia rheumatica suggesting a synovitis.[32] A follow-up of these patients showed evidence of chronic axial synovitis.[33] Arteriograms of the great vessels have shown stenosis and occlusions, especially of the subclavian, axillary and brachial vessels in some patients with temporal arteritis.[34] Involvement of large arteries throughout the body occurs in 14% of patients with temporal arteritis.[35, 36]

Relationship Between Polymyalgia Rheumatica and Temporal Arteritis

One of the most controversial aspects of polymyalgia rheumatica and temporal arteritis is their interrelationship. The full extent of the relationship remains unknown. Studies suggest that polymyalgia rheumatica occurs in about 50% of patients with temporal arteritis; that temporal arteritis occurs in approximately 50% of all patients with polymyalgia rheumatica; and that temporal arteritis is present in about 15% of polymyalgia rheumatica patients without clinical evidence of temporal arteritis.[2, 6]

Another major consideration is the risk of partial or total visual loss from each of these two diseases. Recent studies suggest that the frequency of partial or total visual loss in temporal arteritis is about 17%[11] whereas it is reduced to 1% to 2% in polymyalgia rheumatica without clinical evidence of temporal arteritis.[9, 37-39] With this in mind, any patient with polymyalgia rheumatica should be very thoroughly checked for clinical evidence of temporal arteritis (Table 5). If evidence for temporal arteritis exists, a biopsy is warranted.

Should all patients with polymyalgia rheumatica have temporal artery biopsies performed? This is difficult to answer, but some authorities think that since those patients with polymyalgia rheumatica without clinical evidence for temporal arteritis are unlikely to develop complications of

TABLE 6
TREATMENT OF TEMPORAL ARTERITIS

45-60 mg prednisone daily until all reversible symptoms and signs are gone and laboratory tests are normal (usually 4-6 weeks).
Then gradual (≤ 10%) weekly decrements as tolerated.
When dosage is 10 mg/day reductions should be in steps of 1 mg/*month* if tolerated.
5-10 mg/day are often required for 2 or more years.
Close follow-up needed for arterial complications which necessitate resumption of higher doses.
Follow symptoms, signs, ESR, hemoglobin.

TABLE 7
TREATMENT OF POLYMYALGIA RHEUMATICA

Aspirin (Blood salicylate 20 mg/100 ml). Extra rest. Physical therapy.
OR:
Prednisone (5 to 10 mg/day) which is almost always rapidly effective.
Treatment often needed 2 or more years.
Slow tapering of medications when stopping.
Alert patient to possible development of arteritis.
Follow symptoms, signs, ESR, hemoglobin.

temporal arteritis, the expense and morbidity of a biopsy may be avoided.[2, 12, 37, 39] However, the patient is warned of the risks of possible underlying temporal arteritis and the need to contact the supervising physician immediately upon the development of headache, visual decrease, jaw claudication or other symptoms suggestive of vascular compromise.

TREATMENT OF TEMPORAL ARTERITIS

Because of the high likelihood of ocular and major vessel complications, high-dose corticosteroid treatment is recommended for all patients with definite temporal arteritis or symptoms strongly suggestive of it. Table 6 outlines one method of approaching this therapy.[2, 6, 9] A recent study[40] comparing modes of administration of prednisone to patients with temporal arteritis strongly suggests that alternate-day prednisone therapy is not adequate in most patients with temporal arteritis and should be avoided at least during the early phase of treatment. In that study, three different modes of administering the same total dosage of prednisone were compared. Disease suppression after one month of treatment occurred in 18 of 20 patients receiving 15 mg of prednisone every eight hours; 16 of 20 patients receiving 45 mg of prednisone in a single dose each morning; and in only six of 20 patients receiving 90 mg of prednisone on alternate mornings.

TREATMENT OF POLYMYALGIA RHEUMATICA

The treatment of polymyalgia rheumatica is presented in Table 7.[2, 5, 9, 41] Small doses of prednisone are highly effective in polymyalgia rheumatica and usually more rapidly effective than aspirin, but in this age group a commitment to several years of prednisone treatment may lead to complications. Moreover, small doses do not protect against the development of the ocular or major vessel complications of temporal arteritis, if this disease is coexisting. For these reasons, some physicians prefer a trial of two to four weeks of aspirin first for polymyalgia rheumatica.[5, 9, 29]

COURSE, MORBIDITY AND MORTALITY IN POLYMYALGIA RHEUMATICA AND TEMPORAL ARTERITIS

With treatment, the reversible symptoms subside rapidly, often within a few days, followed frequently in two to four weeks by a return to normal in the erythrocyte sedimentation rate and hemoglobin and hematocrit values.[8, 11, 37, 42, 44] The disease process itself, however, commonly continues for two or more years, and exacerbations of it may be indicated by a return of symptoms and elevation of the sedimentation rate.[5, 11, 44]

The major morbidity of temporal arteritis, as previously mentioned, is visual loss. Visual loss in one eye will often be followed rapidly by visual impairment in the second eye if the patient is untreated. When bilateral involvement occurs, the time lapse between unilateral and bilateral involvement is 24 hours in 36%, two to seven days in 36%, and eight to 30 days in 28%.[45] The emergency need for corticosteroid treatment, thus, is emphasized. Gangrene, though rare, may occur as a result of arteritis in the vessels supplying the extremities, scalp and tongue.

Survival of patients with temporal arteritis is normal as compared to controls matched for similar age and sex.[11] However, aortic dissection and rupture, coronary arteritis and strokes of the brain stem directly related to temporal arteritis have been causes of death in this disease.[29, 46]

Experience with patients hospitalized with temporal arteritis and/or polymyalgia rheumatica at the University of Missouri Health Sciences Center during the four years, 1975-1979, is shown in Table 8. Six of 13 patients with temporal

TABLE 8
TEMPORAL ARTERITIS AND POLYMYALGIA RHEUMATICA
UMHSC 1975-1979

	Number of Patients	*Polymyalgia Rheumatica*	*Visual Defects*	*Complications*	*On Corticosteroids Last Visit*
Temporal arteritis	13	6	5	12	13
Polymyalgia rheumatica	7	7	0	1	5

arteritis had associated polymyalgia rheumatica. Five of these 13 patients had visual defects. All 13 were still taking corticosteroids at the time of their last follow-up visit. There were no visual defects among the seven patients who had polymyalgia rheumatica alone. Five of these seven were patients still receiving corticosteroid therapy at the time of their last visit.

Complications during the course of treatment of patients with temporal arteritis occurred in 12 patients and included aggravation of diabetes mellitus or development of hyperglyemia (six), hypertension (five), pneumonia (two), collapsed vertebrae and flail chest with sternal fracture (one), tuberculosis (one) and ruptured bowel (one). Two patients died. One of these had necrotizing pseudomonas bronchopneumonia, and one had myocardial infarcts, congestive heart failure, pneumonitis and adenocarcinoma of the stomach. In neither was active arteritis found at postmortem examination.

Complications in patients with polymyalgia rheumatica consisted of herpes zoster and possible tuberculosis in one patient. This experience serves to emphasize that although corticosteroids in these elderly patients usually dramatically alleviate symptoms and may prevent loss of vision and fatal complications, they can be associated with significant morbidity and even mortality, particularly in the patients with temporal arteritis who, by necessity, require high therapeutic dosages of corticosteroids initially.

The potential for complications of corticosteroid therapy in polymyalgia rheumatica and temporal arteritis is emphasized by the recent reports describing the duration of therapy required for these patients. Fernandez-Herlihy performed a follow-up study of 29 patients with temporal arteritis. At the time of the study, eight patients had died and ten were lost to follow-up. Of the 11 known to be living, nine were still taking corticosteroids after six to 12 years. Complications of treatment included symptomatic osteoporosis (three patients), glaucoma (two patients), cataracts (two patients), marked Cushing's syndrome (one patient) and herpes zoster (one patient).[47]

Von Knorring studied 53 patients (43 polymyalgia rheumatica, ten temporal arteritis). Thirty-four of the 53 had received prednisolone continuously for eight months to nine years (mean three years). They concluded that most patients need treatment for at least two to three years and that withdrawal of corticosteroids before one year is not advisable. Furthermore, those patients removed from steroid therapy should have clinical and laboratory checkups for at least one year after the end of treatment.[48]

The experience of some has differed somewhat from this. Huston *et al*[11] found that more than one half of patients with giant cell arteritis required treatment for less than one year and most could discontinue treatment with corticosteroids after two years although some required more prolonged therapy.

Summary

Polymyalgia rheumatica is a rheumatic disease of the aged that probably occurs more frequently than is presently recognized. It is often associated with temporal arteritis. Our understanding of these two diseases and their interrelationship is primitive. High-dose corticosteroid treatment of temporal arteritis is urgent because of potential blindness and major vessel disease. Treatment of polymyalgia rheumatica without temporal arteritis may consist of aspirin or low-dose corticosteroid therapy, but the physician should warn such patients of the risks and symptoms of temporal arteritis.

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(Continued from page 338)

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Sua cuique vita obscura est.
— Latin Proverb

(To every man his own life is a mystery.)

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HLA in Human Disease: What Does It Mean?

THE PAST DECADE has seen an explosion of important developments in immunology. Every field of medicine has been influenced by these developments. The human leukocyte antigens (HLA) system has played a central role. HLA typing has been used as a research and clinical tool, and continued studies of the HLA system may provide fundamental explanations about the pathogenesis of human disease. The importance of the HLA system was emphasized in 1980 when the Nobel Prize for Physiology and Medicine was awarded for work on "genetic determined structure of the cell surface that regulates immunological reactions!"[1] This article contains a review of the HLA system and presents a framework for its understanding and application by the practitioner.

HLA or human leukocyte antigens are a set of complex glycoproteins on the surfaces of nucleated cells. The HLA-A, -B and -C series of antigens are composed of heavy and light chains (Fig. 1). The heavy chain is a complex glycoprotein with a molecular weight of about 43,000 daltons. Variations in this part of the protein structure determine the different HLA antigens as detected by serological tests.

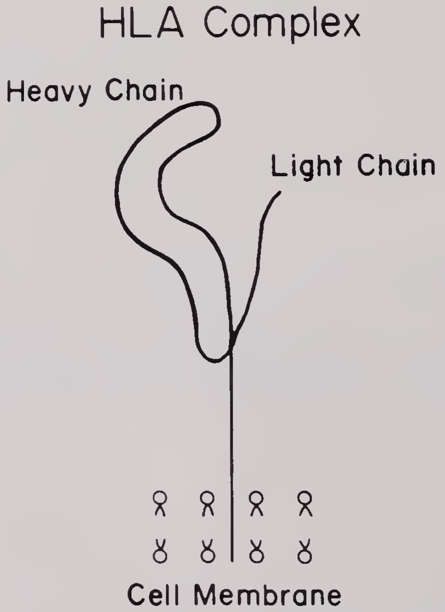

Fig. 1 The HLA Complex is composed of a 43,000 dalton heavy chain glycoprotein that is unique to each HLA type and a 16,000 dalton light chain composed of a microglobulin common to all HLA types.

The heavy chain of the HLA protein structure is determined by a complex and highly variable genetic region located on the short arm of the sixth human chromosome (Fig. 2).[2] The light chain is a non-glycosylated β_2 microglobulin, common to all HLA types, which is determined by a separate genetic region on the 15th human chromosome.

The D antigens have been less well characterized structurally. They are known to be determined by genes located close to the HLA-A, -B and -C genes on the sixth chromosome. As seen in the second figure, the HLA-A, -B, -C and -D determining genes exist in close association with genes that determine the structure of complement and proteins affecting immune function. Other genes which affect the expression of a diverse group of human diseases are suspected of being linked closely to HLA genes.[3]

A specific histocompatibility gene determines each HLA antigen on the surface of nucleated cells. The different HLA antigens are labeled by a

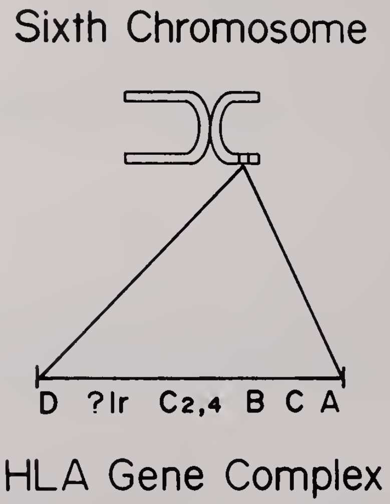

Fig. 2 Magnified view of the HLA gene complex on the sixth human chromosome shows genes which determine HLA-A, -B, -C and -D specificities, control production of the second and fourth components of complement and (possibly) regulate immune function of B-lymphocytes, T-lymphocytes and macrophages.

Human leukocyte antigens (HLA) have played a central role in recent important developments in immunology. This was evidenced by the award of the 1980 Nobel Prize in Physiology or Medicine for the discovery of the HLA system. The authors explain examples of clinical uses of HLA typing and describe the typing method. They also include a comprehensive list of HLA types in specific diseases.

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different Arabic number for purposes of nomenclature. For example, B-8, B-27 and B-14 designate unique antigens present on the cell surface. Each antigen is determined by a separate gene in the histocompatibility region on the sixth chromosome. Currently, there are approximately 90 different HLA types recognized in humans.

Routine HLA-A, -B and -C typing is performed by using a battery of standardized sera. Each serum contains known antibodies to specific HLA antigens. Serum is incubated with peripheral blood lymphocytes and complement. Cells with surface HLA antigens that are recognized by a specific antibody are killed in the presence of complement. A vital dye is added and those cells that have had their surface membranes damaged by the antigen-antibody-complement complex will take up dye and become easily identifiable under the phase contrast microscope (Fig. 3-4).[4] A similar method is being developed for HLA-D typing that is currently being done using mixed lymphocyte cultures.[5]

The impetus to search for HLA associations with human disease was the discovery of a strong association between certain forms of leukemia in mice and the histocompatibility system in the mouse, the H-2 system. H-2 is the counterpart of the human HLA system. In 1967, an association between Hodgkin's disease and HLA 4c was reported.[6] This was the first human disease shown to be associated with an HLA antigen. As the possibility of association between specific HLA antigens and specific diseases became widely appreciated in the mid 1970s, the number of studies increased at an ever-accelerating rate. Almost every major journal in internal medicine contains an article each month describing this expanding area. There are three general categories of diseases associated with specific HLA types: malignant diseases, diseases with a hereditary element and diseases with a suspected immunological basis. A representative list of some reported associations is shown in Table 1.[3, 7]

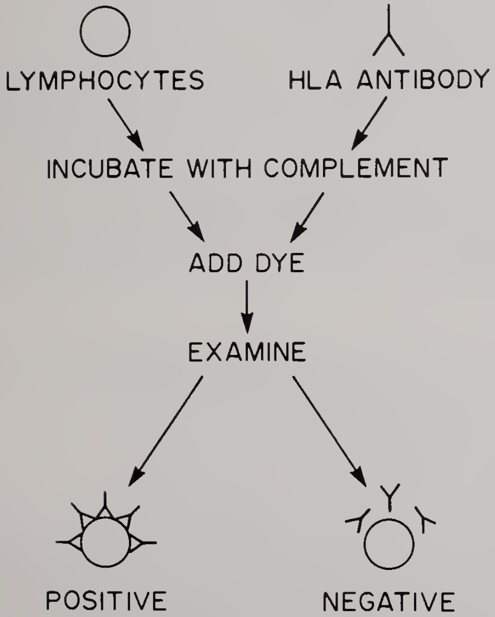

Fig. 3 Human peripheral blood lymphocytes are exposed to a panel of known HLA-specific antibodies, incubated with complement and mixed with a vital dye. Lymphocytes are examined under the phase contrast microscope for the presence of dye within the cell. Cells recognized by HLA-specific antibodies in the presence of complement are killed, and dye enters and stains the cell.

One of the most exciting aspects of this new

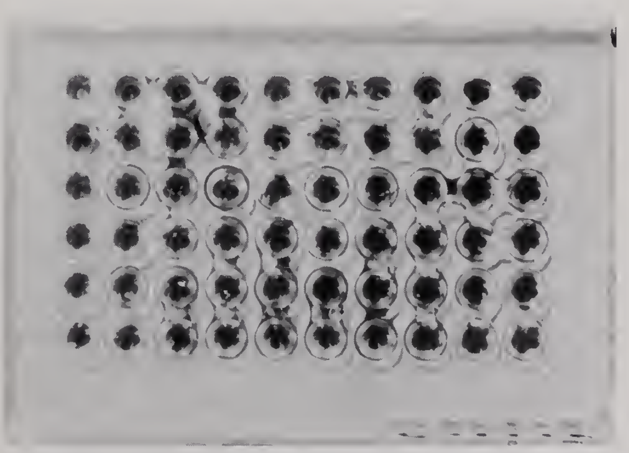

Fig. 4 HLA typing tray contains lymphocytes that are tested against a battery of HLA-specific antibodies.

TABLE 1
DISEASES ASSOCIATED WITH SPECIFIC HLA REACTIONS*

- ALLERGY
  - Dust allergy AW33†
  - Rye grass group 1 allergy B8
  - Avian hypersensitivity BW40
  - Hayfever AW19
  - Ragweed allergy B7
  - Grass pollinosis DRW3‡
- CARDIOLOGY
  - Idiopathic cardiomyopathy B12, B5, BW35
  - Mitral valve prolapse A3, BW35
  - Rheumatic valve heart disease A2
  - Congenital malformation of the heart A2
- DERMATOLOGY
  - Psoriasis B13, B17, BW37, BW38, CW6, B37, B27, BW16
  - Dermatitis herpetiformis B8, DW3, DRW3
  - Pemphigus B13, A10
  - Recurrent herpes labialis A1, A29, B8
  - Alopecia areata B12
  - Granuloma annulare BW35
- ENDOCRINOLOGY
  - Juvenile onset diabetes mellitus B8, B18, CW3, B15, DW4, DW3, DRW4, DRW3, B54
  - Graves disease B8, DW3, BW35, BW46
  - Addisons disease B8, DW3
  - Autoimmune thyroiditis B8, DRW3, BW35
  - Congenital hypothyroidism in Japan AW24
  - Adrenocortical hyperfunction A1, S3
- GASTROENTEROLOGY
  - Celiac disease B8, DW3, DRW3
  - Chronic alcoholic pancreatitis B40
  - Autoimmune chronic active hepatitis B8, DRW3
  - Hepatitis B associated chronic active hepatitis B18
  - Healthy HBsAg carriers BW41
  - Hemochromatosis B14, A3
  - Alcoholic liver disease B8,B40
  - Ulcerative colitis BW35, AW24, B5
  - Crohn's disease B15
  - Pernicious anemia B7
- HEMATOLOGY/ONCOLOGY
  - Idiopathic thrombocytopenia B8
  - Hodgkin's disease A1, B8, A10, B5, B15
  - Acute leukemia A2, B12
  - Retinoblastoma B12, BW35
  - Mycosis fungoides CW1
  - Nasopharyngeal carcinoma Sin 2a (Proposed HLA D antigen)
- INFECTIOUS DISEASE
  - Tuberculosis B8
  - Leprosy DRW2, B8, B17, DRW6
- NEPHROLOGY
  - Goodpasture's disease DRW2
  - IgA mesangial nephropathy BW35
  - Polycystic kidney disease B5
- NEUROLOGY
  - Multiple sclerosis A3, B7, B18, DW2, DRW2, B40
  - Myasthenia gravis B8, DW3, B12
  - Paralytic poliomyelitis B7, BW16
  - Optic neuritis DW2
  - Schizophrenia A28, CW4
  - Manic depressive disorders BW16
- OPHTHALMOLOGY
  - Acute anterior uveitis B27
  - Juvenile chronic uveitis B27
  - Primary open angle glaucoma B7, B12, BW35
- PULMONARY
  - Asbestosis B27
  - Cryptogenic fibrosing alveolitis B12
- RHEUMATOLOGY
  - Ankylosing spondylitis B27
  - Reiter's disease B27
  - Psoriatic arthritis BW38, B13, B27, BW17
  - Juvenile rheumatoid arthritis B27, B15
  - Sicca syndrome B8, DW3
  - Behcet's disease B5
  - Systemic lupus erythematosus DRW2, DRW3, A1, B8, BW15
  - Adult rheumatoid arthritis B15, DW4, DRW4
  - Dermatomyositis B14, B8
  - Yersinia arthritis B27
  - Shigella arthritis B27
  - Sarcoid arthritis B8
  - Frozen shoulder B27
  - Ankylosing spondylitis in inflammatory bowel disease B27
- OTHER
  - Kawasaki disease BW22
  - Buerger's disease A9, B12, DRW2
  - Gold toxicity in rheumatoid arthritis DRW2, DRW3
  - Penicillamine toxicity in rheumatoid arthritis DRW2, DRW3

* Some diseases are associated strongly with specific HLA reactions. Others have weak associations. This table is not intended for use as a guide to diagnosis.

† W indicates "workshop" or a tentative HLA type not yet recognized at an international conference on HLA typing.

‡ R indicates a HLA-D "related" antigen recognized by serological testing rather than mixed lymphocyte culture technique.

area is the relationship between HLA and mechanisms of human disease.[8] One theory proposes that HLA antigens act as cell surface receptors. The attachment of viruses or hormones may modify cell functions and allow disease to occur. A second theory assumes that HLA antigens share common antigenic determinants with viruses or bacteria, leading to diminished abilities of the cells to recognize infectious agents as foreign substances. This mechanism may blunt normal antimicrobial defenses. Some direct evidence supports this theory.

Finally, the most attractive and scientifically sound theory is the concept that HLA genes themselves are not determinants of disease. Rather, another gene or group of genes closely linked to the HLA region play a critical role in producing various disease states. A substantial body of experimental evidence supports this concept. For example, in the analogous H-2 system of the mouse, genes which control immune responsiveness by regulating T-lymphocytes, B-lymphocytes and macrophages are intimately linked to the histocompatibility region and inherited together as essentially a single genetic unit. A similar linkage is suspected to be operating in man.[9, 10]

Let us now turn to two examples of the application of the HLA system in clinical medicine. Ankylosing spondylitis is a common inflammatory disease of young men that involves sacroiliac, apophyseal and costovertebral joints. It is the prototype of a disease closely linked to the HLA system. The HLA B-27 antigen is present in more than 90% of white persons with ankylosing spondylitis, while it occurs in only 3% to 12% of the general population.[11] Although not all people who possess HLA B-27 have ankylosing spondylitis, the presence of this specific antigen increases the risk of developing ankylosing spondylitis 90-fold. The most useful application of this disease marker has been in studies of the epidemiology of ankylosing spondylitis. However, B-27 may assist the practitioner in diagnosing early or atypical ankylosing spondylitis.

A second example of the application of the HLA system to clinical medicine is hemochromatosis. Hemochromatosis is an autosomal recessive disease characterized by inappropriately high absorption of dietary iron and increased body stores of iron leading to widespread tissue damage. The underlying defect in hemochromatosis has not been identified. Recently, it has been recognized that certain HLA types on the HLA-A locus are in close proximity to the gene resulting in this disease.[12] Previously, there was no simple test for the early identification of individuals who were homozygous for the hemochromatosis gene, and it was not possible to identify carriers of the trait. The identification of the association between hemochromatosis and HLA A-3 has made it possible using routine serological techniques to identify carriers and individuals who will develop the disease state if they are left untreated.

In summary, the HLA system represents a complex and important genetic region associated with a vast number of human diseases. It appears to exert its effect, at least in part, through modulation of immune responses. The recognition of the association between HLA and human disease represents a landmark discovery in the pathogenesis of human disease which we are just beginning to understand.

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The AMA's direct membership campaign began last month with mailings to approximately 240,000 physicians and 40,000 medical students. The direct membership approach was approved at the 1981 Annual Meeting. Sent only to individuals who are members of neither the AMA nor their state societies, the mailings explain how the recipients can join the AMA by first going though county and/or state membership or by going to the AMA directly. Responses are screened through a system involving the state societies. AMA membership in 1981 was 241,700. Of that number, 23,910 were residents, 24,044 were students and 36,067 were dues exempt.

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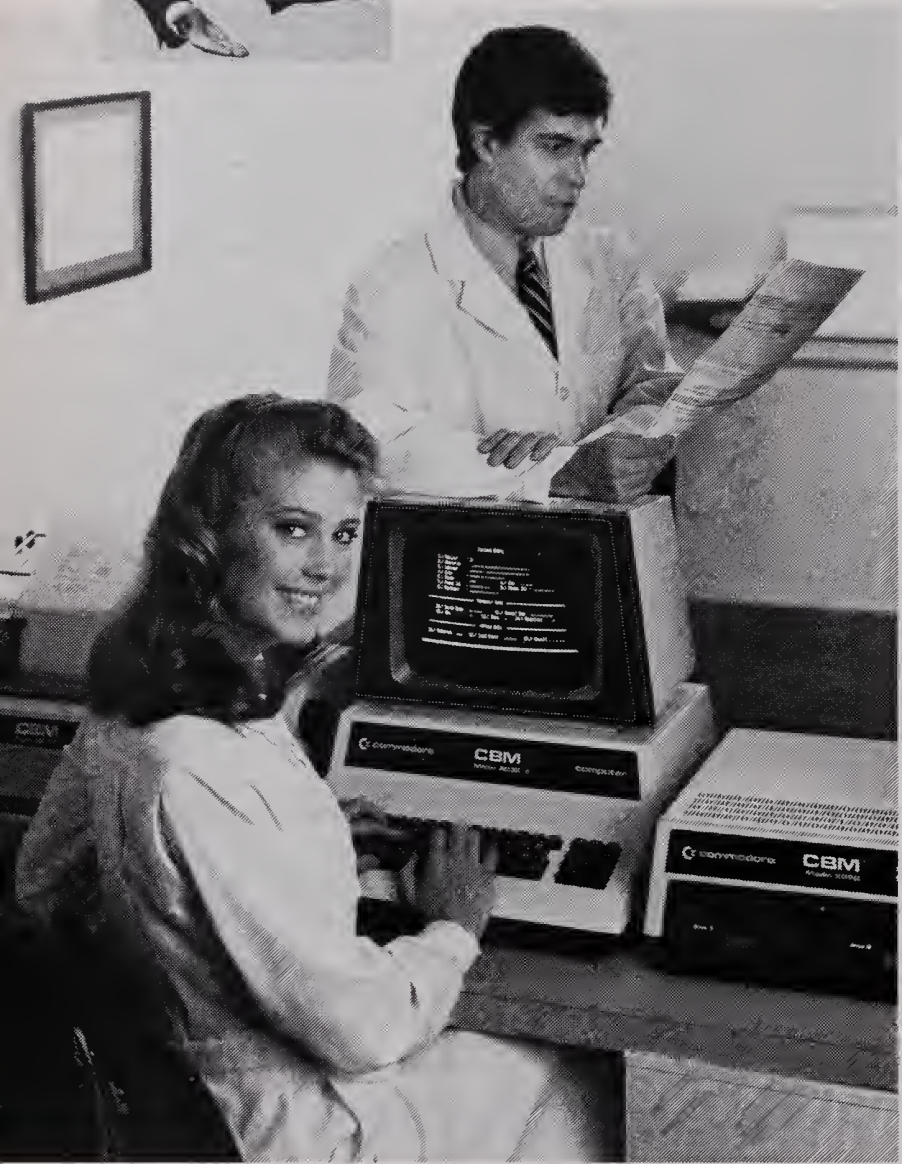

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President's Message

Gloom, Doom and Depression

It has been a long, hard, winter and the number of older people who have been depressed has been notable in my practice. Now that spring is here, this same group seems to have an inordinate percentage of depressed members despite the usual brightening of mood this time of year. In talking to the 65-and-over age group, who for the most part are retired, I find that many of them spend a considerable portion of the day listening to news broadcasts on the radio or watching TV news programs in addition to reading news items in newspapers and magazines.

John I. Matthews, M.D.

Most people 65 and over remember the great depression in a very personal way. This meant loss of schooling opportunities, loss of jobs, loss of homes and businesses and, in many instances, a real hardship with inability to feed and clothe their families properly. To these people, a business recession and the suggestion of a possible depression strikes real terror in their hearts.

Several times a day, they are told that there are approximately 9% to 10% unemployed persons, that Social Security will have to be adjusted downward, that things will get worse before they get better and that the stock market will probably go to the 750 level or worse. They become more and more upset.

Now, of course, if 9% to 10% of the work force are unemployed, 90% remain employed. However, this is never emphasized and worried people never seem to think of it. In real terms, there were 106,821,000 people in the work force in 1980 (U.S. Department of Labor, Bureau of Labor Statistics) and currently some 10 million to 11 million are unemployed while more than 90 million still hold jobs. In 1930, there were 45 million members of the labor force and in the depth of the great depression, 14 million to 16 million job holders were unemployed (World Book — Discussion of Great Depression).

The majority of people working in the various branches of the media are far too young to have had any personal experience in the great depression. It is difficult for them to conceive of the apprehension they produce in our senior citizens when they casually refer to a "possible severe depression." More complete reporting should help to emphasize both the doughnut and the hole with less gloom, less sense of doom and less depression for our patients.

Meetings arranged between members of local medical societies and representatives of the local media might possibly improve the overall picture.

(It is interesting to note, of course, that the Health and Human Services [HHS] budget, widely recognized as the third largest budget in the world, is exceeded only by the total United States budget and the total budget of the USSR. The HHS budget is greater than that in any foreign government other than the USSR and is greater than the total budget of all 50 states. In 1983, it will grow in size due to entitlements.)

MSMA Auxiliary

Auxiliary "Practicing Volunteers"

Missouri State Medical Association Auxiliary members are "practicing volunteers." Individually and collectively, they enhance the image of medicine through their involvement in various community health projects. A perusal of the annual reports of component auxiliary presidents reflects many volunteer hours spent in planning and doing, from promoting legislation in the interest of public health and safety to preparing medical supplies for overseas projects. I would like to call attention to highlights from some of these county auxiliary reports.

Mrs. Sam Gaston
President

Boone County: CPR classes in cooperation with the Heart Association; Holiday Bazaar to benefit AMA-ERF for $319.45.

Buchanan County: Cosponsor for disabled persons puppet show, "Kids On The Block," for fourth graders.

Callaway County: Coalition fund raising project with hospital auxiliary to finance nursing scholarships and equipment.

Cape Girardeau: CPR classes for 225 people; assistance to three community agencies; two nursing scholarships; Meals on Wheels.

Clay County: "Lazy Eye" screening project for preschoolers; infant auto restraint rental program at hospitals.

Dunklin County: Hemocult Screening Tests in cooperation with the Cancer Society; Smoking Education Week; CPR class; child passenger restraint project; Sight Saving project.

Grand River: Food auction for MSMF ($427) and AMA-ERF ($324). Hospital-based child restraint program for newborns.

Greene County: GEMS program for seventh and eighth graders; blood pressure booth with Heart Association at Ozark Empire Fair; International Health Work Day; five infant car seats for KISS.

Jackson County: International Health project for World Medical Relief; AMA-ERF Holiday Sharing Card, $1,158; RN volunteers to assist with health screening at a senior citizens' day center.

Jasper County: Week-long Health Fair in fall and spring reaching 800 third graders by 50 volunteers; monthly birthday parties at local nursing home; AMA-ERF Holiday Sharing Card, $1,940.

Jefferson County: Book Fair with American Heart Association, $600; delivered meals to homebound.

Johnson County: Philanthropic projects with other community groups.

Lafayette-Ray: Coalition of members with other community organizations; distribution of child passenger safety restraint leaflets.

Morgan-Miller-Moniteau: Community involvement; support of AMA-ERF.

Pettis County: Christmas Eve Hospital Chapel service for patients and staff; child passenger restraint programs for community groups; AMA-ERF Christmas Sharing Card, $580.

Saline County: "First Ride — Safe Ride" project in cooperation with the hospital Christmas Bazaar.

St. Louis Metropolitan: Volunteers for Third Annual Health Fair; donated two infant passenger restraints for hospital classes; Holiday Craft Fair and Luncheon benefit for AMA-ERF.

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Oct. 29-30	Conference: Spinal Disorders in Children

St. Louis University Medical Center
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3544 Caroline St., St. Louis 63101
(314) 664-9800, Ext. 127
***Contact:* John A. Grellner, Director**

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Oct. 29-30	Spinal Disorders in Children

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(Continued on next page)

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Stanley Roper, M.D., Ozark 65721; graduate of Washington University, 1939; member of Ozarks County Medical Society; aged 67; died April 3, 1982.

Samuel J. Freund, M.D., 7507 Parkdale, Clayton 63105; graduate of St. Louis University, 1927; member of St. Louis Metropolitan Medical Society; aged 77; died April 19, 1982.

Homer B. Matthews, M.D., 2013 S. Compton, St. Louis 63104; graduate of Harvard, 1951; member of St. Louis Metropolitan Medical Society; aged 58; died April 24, 1982.

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Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H influenzae* [8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information.

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8. Principles and Practice of Infectious Diseases (edited by G L. Mandell, R G Douglas, Jr. and J.E Bennett), p. 487 New York John Wiley & Sons, 1979

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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NEWS
From the Medical Schools

ST. LOUIS UNIVERSITY

Francis L. Horvath, M.D., dean of the School of Allied Health Professions, was elected chairman of the Joint Review Committee (JRC) on Eductional Programs for Physician Assistants. She will serve for two years.

Dr. Horvath

As chairman, Dr. Horvath will direct the committee in arranging and reviewing on-site evaluations of physician assistant programs to determine their accreditation status.

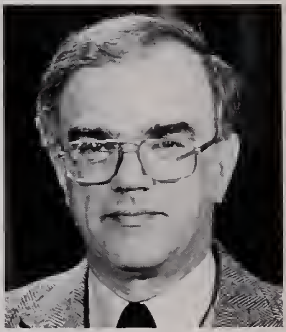
Anthony James Rejent, M.D. has been named medical director of the Ranken Jordan Home for Convalescent Crippled Children, succeeding *Dr. Peter G. Danis*, who will continue to serve the Home as a consultant. Dr. Rejent is assistant clinical professor of pediatrics at the medical center and director of the Cystic Fibrosis Center at Cardinal Glennon Memorial Hospital for Children since 1969.

The Ranken Jordan Home is a nonprofit, privately endowed extended pediatric care facility that provides skilled nursing and therapy for children with medical, orthopedic or neurologial disorders. The medical director is responsible for all medical aspects of the care and advises the Ranken Jordan board of directors on medical matters.

James C. Lee, Ph.D. associate professor of biochemistry, has been awarded a three-year, $232,000 grant from the National Institute of Neurological and Communicative Disorders and Strokes.

During this granting period, Dr. Lee and his research associates will focus on the biophysical chemistry of microtubule, a protein believed to participate in cell division, maintenance of cell structure and secretion of hormones. Anti-tumor drugs will be used to determine which particular cell functions these drugs halt. The researchers hope to discover the mechanisms of these drugs and define the role of microtubule in these cellular functions.

Raymond G. Slavin, M.D., professor of internal medicine at the School of Medicine, has been named president-elect of The American Academy of Allergy and Immunology. The Academy is the largest professional organization in the field with members specializing in the diagnosis, care and study of allergic diseases including asthma, hay fever and a number of diseases of the skin.


Dr. Slavin

Dr. Slavin edits the Allergy and Immunology section of *Tice Practice of Medicine* and has also served on the editorial boards of the *Journal of Allergy and Clinical Immunology, Current Views in Allergy and Immunology* and the *Journal Club of Allergy*.

In addition, Dr. Slavin gave the tenth Annual Clemens von Pirquet Lecture at Georgetown University on May 21. Sponsored by The International Center for Interdisciplinary Studies of Immunology, the conference seeks to provide the most recent update in the management, therapy and prevention of allergic and immunologic diseases. Dr. Slavin spoke on "Clinical Disorders of the Nose and Their Relationship to Allergy."

Dr. Jerome T. Y. Shen has been appointed as an Adjunct Professor in Judicial Administration of the National College of Juvenile Justice at the University of Nevada in Reno. The dean of the College is *Dr. Louis W. McHardy*.

Dr. Shen is a member of the Editorial Board of *Postgraduate Medicine* in the field of adolescent medicine and has written and edited a series of articles for that publication.

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. James O. Davis, professor and chairman of the Department of Physiology, has been elected to membership in the National Academy of Sciences for his distinguished and continued contributions to research on the physiology of hypertension and congestive heart failure.

Dr. Davis was one of 60 new members elected on April 27 at the business session of the 119th annual meeting of the Academy, a private organization of 1,386 distinguished U.S. scientists and engineers concerned with the furtherance of science and its use for human welfare.

Election to the Academy, established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln, is considered to be one of the highest honors that can be accorded an American Scientist or engineer.

The academy is not a government agency, but acts as an official adviser to the federal government, upon request, in any matter of science or technology.

Dr. Ernest Sears, professor emeritus of agronomy, was elected to membership in the Academy in 1965.

Dr. Davis received his B.S. degree in 1937 from Northeastern State Teachers College in Tahlequah, Okla. and his M.A. and Ph.D. in Zoology at the University of Missouri-Columbia in 1939 and 1942. In 1943, he completed his B.S. in Medicine with Distinction at the University of Missouri School of Medicine, and two years later earned his M.D. degree from the Washington University School of Medicine in St. Louis.

After 19 years at the National Institutes of Health in Bethesda, Md., he joined the UMC School of Medicine faculty in 1966.

Dr. Davis is president of the International Society of Hypertension, and has 250 publications to his credit concerning his research in the areas of renal physiology, hypertension and heart failure.

Dr. Javid H. Kashani, assistant professor of psychiatry (child psychiatry), presented a paper at a recent conference on childhood depression sponsored by Mercy Hospital and Medical Center in Chicago. The topic of his presentation was "Etiology and Treatment of Childhood Depression from a Psychobiological Point of View."

Dr. Kashani has gained international recognition for his research relating to childhood depression and hyperactivity and is the author of numerous articles concerning these areas. Currently, he is conducting a grant-supported study of childhood depression in cooperation with the University of Otago, Dunedin, New Zealand, and other members of the UMC psychiatry faculty.

Dr. Karl D. Nolph, professor and director of the Division of Nephrology, was an invited lecturer in Toledo, Spain on March 16-20. His topic was the increased utilization of continuous ambulatory peritoneal dialysis in Spain. Dr. Nolph addressed the same topic regarding Great Britain during a lecture in Norwich, England on April 4. It was attended by officials from the National Health Service and members of Parliament.

Dr. Grodon Sharp, professor of medicine and director of the Division of Immunology & Rheumatology, presented a talk on "Mixed Connective Tissue Disease" at the Seminar in Advanced Rheumatology of New York University in March.

Dr. Philip C. Anderson, professor of medicine and director of the Division of Dermatology, recently presented a talk to the Wapello County Medical Society in Ottumwa, Iowa.

UNIVERSITY OF MISSOURI-KANSAS CITY

Seventy-seven students received their M.D. degrees from the School of Medicine on May 15 at commencement ceremonies that marked the culmination of a week of activities for the graduates who took the Oath of Physicians on May 14. The first annual Carl Migliazzo Memorial Lecture was given by Nobel Laureate *Frederick Robbins* on "Medicine in a Changing Worlds." Graduating senior *Robert Stuppy* addressed his classmates at the Oath ceremony after remarks made by *Chancellor George Russell, Dean Harry Jonas* and special consultant to the chancellor, *Dr. E. Grey Dimond.*

Dr. Stuppy was selected by the UMKC Awards Committee to receive the Missouri State Medical Association Award for 1982.

The School of Medicine participated in the debut of American Cablevision's hospital/institutional cable TV channel on May 4. The event marked the first direct television communications between the School of Medicine, St. Mary's and Trinity Lutheran Hospitals and the Rehabilitation Institute. After the beginning of a satellite teleconference, the program switched to the School of Medicine's television studio for a local inaugural telecast.

Dean Jonas, Dell Nyland of the Kansas City Area Hospital Association and *Bryce Pingle* of Touche Ross and Company participated in the local telecast.

Dean Jonas recently served as a member of the Regional Screening Panel for White House Fellowships. The White House Fellowship Program selects 14 to 20 outstanding young individuals who spend a one-year period in the Office of

Cabinet Level Agencies or the Office of the President or the Vice-President.

Dean Jonas served on the regional panel held in St. Louis and interviewed a dozen candidates. The chairman of his regional panel was former Secretary of Agriculture *Clifford M. Hardin*.

The Ambassador of the People's Republic of China to the United States recently visited the School of Medicine, where he viewed two films made on the life of Edgar Snow. *Mr. Chai Zemin* was in Kansas City to give a lecture jointly sponsored by the Carolyn Benton Cockefair Chair and the Edgar Snow Memorial Fund Inc.

The first annual Rex L. Diveley memorial Lecture was held on April 30 in the School of Medicine. *Mrs. Rex L. Diveley* established the lectureship commemorating her late husband for the advancement of orthopaedic residency education at UMKC. *Dr. Harold Sofield* of Chicago lectured on "Medicine Then and Now."

WASHINGTON UNIVERSITY

Dr. Michael M. Karl, internist and professor of clinical medicine, has been elected to a four-year term as Governor-Elect of the American College of Physicians for the state of Missouri.

Dr. Karl received his M.D. degree at the University of Louisville in 1938 and served his internship at City Hospital in St. Louis. He served his residency in internal medicine at City Hospital and Washington University.

Dr. Joseph J. Volpe, professor of pediatrics, neurology and biological chemistry, will be the first to hold a newly endowed professorship in developmental neurology at the school.

A. Ernest Stein, a St. Louis public accountant, and his wife, *Jane*, are endowing the professorship. Mr. Stein, an accountant here for more than 50 years, merged his firm in 1980 with Peat Marwick & Mitchell, for whom he is a consultant. He was graduated in 1926 from Washington University, attended Harvard University Graduate Business School and received his master's degree in accounting from New York University.

Mr. Stein is one of only four St. Louis area residents to be made a lifetime honorary member of the American Institute of Certified Public Accountants.

The School of Medicine has received $61,000 from the *Mr. and Mrs. Lyndon C. Whitaker* Charitable Foundation in Clayton for purchase of a sophisticated new microscope photometer. The gift was announced by *Urban C. Bergbauer*, trustee of the Foundation.

The equipment will greatly benefit a variety of molecular biology research projects in th departments of anatomy and neurobiology, and biological chemistry, according to *Samuel B. Guze*, M.D., vice-chancellor for medical affairs.

The School of Medicine has received a $500,000 grant from the Pew Memorial Trust of Philadelphia to be used toward construction of its new Clinical Sciences Research Building. It is expected that this 11-story structure with its 375,000 square feet will cost $50,000,000.

Chancellor William H. Danforth, M.D., noted that this gift is the first that Washington University has received from the Pew Memorial Trust. He said, "The building will contain excellent new facilities and provide added space for some of our most significant research efforts, ranging from cancer to mental illness and from new techniques in surgery to new understanding in immunology."

Samuel B. Guze, M.D., vice-chancellor for medical affairs at Washington University, said, "The proposed new structure will facilitate collaborative research and physically unite for the first time all institutions at the Washington University Medical Center."

The Pew Memorial Trust is the oldest and largest of several charitable trusts founded by the members of the Pew family and administered by the Glenmede Trust Company as trustee.

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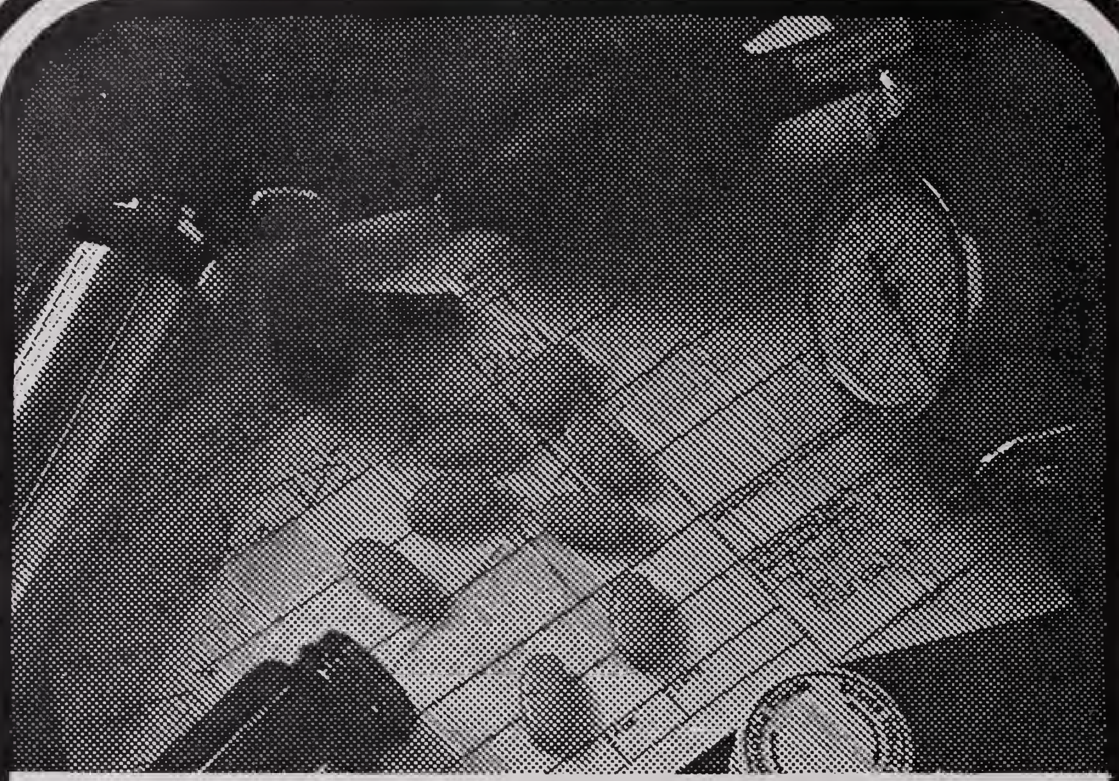

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New Members

Nina K. Ainslie, M.D., 9150 E. 41st Terr., Kansas City 64133, has become a menber of Jackson County Medical Society. Dr. Ainslie is a native of Oneonta, N.Y., received her preliminary education at Bucknell University and her M.D. degree at the University of Rochester in 1977. She specializes in internal medicine.

Brent T. Allen, M.D., 7746 Charing St., Shrewsbury 63119, has become a member of St. Louis Metropolitan Medical Society. Dr. Allen is a native of Honolulu, Hawaii, received his preliminary education at Utah State University and his M.D. degree at Washington University in 1979. He specializes in surgery.

James L. Autin, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Autin is a native of New Orleans, La., received his preliminary education at Tulane University and his M.D. degree at Louisiana State University in 1978. He specializes in otolaryngology and head and neck surgery.

Jeffery L. Belden, M.D., 1502 E. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Belden is a native of St. Elmo, Ill., received his preliminary education at the University of Illinois and his M.D. degree at Southern Illinois University in 1976. He specializes in family practice.

Dale W. Blaise, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Blaise is a native Murphysboro, Ill., received his preliminary education at Southern Illinois University and his M.D. degree at the University of Illinois in 1981. He specializes in family practice.

Robert B. Burchett, M.D., 5535 Delmar Blvd., St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Burchett is a native of Chicago, Ill., received his preliminary education at Loyola University and his M.D. degree at the University of Dominica in 1981. He specializes in internal medicine.

Adolfo P. Calabio, M.D., 230 E. Main, Warrenton 63383, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Calabio is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1969. He specializes in general practice and general psychiatry.

Kim Colter, M.D., 800 E. 5th, Washington 63090, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Colter is a native of Columbus, Ohio, received his preliminary education at the University of California and his M.D. degree at Washington University in 1978. He specializes in family practice.

Robert W. Cooper, M.D., Lake Rd-AA-1, Camdenton 65020, has become a member of Lake of the Ozarks Medical Society. Dr. Cooper is a native of Somerset, Ky., received his preliminary education at the University of Kentucky and his M.D. degree at the University of Kentucky in 1975. He specializes in general practice.

Mark A. Feldman, M.D., 2800 Rock Creek Park, N. Kansas City 64118, has become a member of Clay County Medical Association. Dr. Feldman is a native of New York, N.Y., received his preliminary education at City College of New York and his M.D. degree at George Washington University in 1968. He specializes in orthopedic surgery.

Heriberto A. Ferrari, M.D., Harry S. Truman VA Hospital, Columbia 65201, has become a member of Boone County Medical Society. Dr. Ferrari is a native of Buenos Aires, Argentina and received his M.D. degree at the University of Buenos Aires in 1954. He specializes in anesthesiology.

Rodney K. Geter, M.D., University of Missouri Medical Sciences Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Geter is a native of Baton Rouge, La., received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1979. He specializes in general surgery.

Alicia D. Gonzalez, M.D., 2821 N. Ballas Rd., St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Gonzalez is a native of Buenos Aires, Argentina and received her M.D. degree at the University of Buenos Aires in 1961. She specializes in psychiatry.

Thomas J. Harrison, Jr., M.D., 1012 N. Main, Sikeston 63801, has become a member of SEMO County Medical Society. Dr. Harrison is a native of Birmingham, Ala., received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri-Columbia in 1979. He specializes in pediatrics.

Anne C. Kelly, M.D., 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Kelly is a native of Detroit, Mich., received his preliminary education at Avila College and his M.D. degree at the University of Missouri-Kansas City in 1977. He specializes in general surgery.

Edward H. Kovnar, M.D., St. Louis Children's Hospital, St. Louis 63178, has become a member of St. Louis Metropolitan Medical Society. Dr. Kovnar is a native of Denver, Colo., received his preliminary education at Washington University and his M.D. degree at Washington University in 1977. He specializes in pediatrics.

Charles G. Lockhart, M.D., 700 Oakbrook, St. Louis 63132, has become a member of St. Louis Metropolitan Medical Society. Dr. Lockhart is a native of Springfield, received his preliminary education at the College of Wooster and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in general surgery.

Junior J. Loesch, M.D., 2604 Picher, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Loesch is a native of Kansas, received his preliminary education at the University of Wichita and his M.D. degree at St. Louis University in 1961. He specializes in anesthesiology.

Maureen McShane, M.D., 2920 McGee Trafficway, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. McShane is a native of Milwaukee, Wis., received her preliminary education at Barnes School of Nursing and her M.D. degree at the University of Missouri-Kansas City in 1981. She specializes in internal medicine.

Arvind J. Madhani, M.D., VA Medical Center, Hwy. 67 N., Poplar Bluff 63901, has become a member of Butler-Wayne-Ripley Carter County Medical Society. Dr. Madhani is a native of India, received his preliminary education at Bombay University and his M.D. degree at Gujarat University in 1961. He specializes in thoracic surgery.

Kathy C. Maupin, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Maupin is a native of Allentown, Pa., received her preliminary education at the University of Missouri and her M.D. degree at the University of Missouri in 1981. She specializes in obstetrics and gynecology.

David J. Meiners, M.D., 1732 Tralee, Manchester 63011, has become a member of St. Louis Metropolitan Medical Society. Dr. Meiners is a native of St. Louis, received his preliminary education at Regis College and his M.D. degree at St. Louis University in 1977. He specializes in general surgery.

Nancy R. Mikkelsen, M.D., 1500 N.E. Parvin Rd., Kansas City 64116, has become a member of Clay County Medical Society. Dr. Mikkelsen is a native of Louisville, Ky., received her preliminary education at the University of Missouri-Kansas City and her M.D. degree at the University of Missouri-Kansas City in 1978. She specializes in internal medicine.

Marlene A. Mendoza, M.D., 600 E. 22nd, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Mendoza is a native of the Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of Santo Tomas in 1976. She specializes in psychiatry.

James J. Mongan, M.D., 2220 Holmes Rd., Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Mongan is a native of San Francisco, Calif., received his preliminary education at Stanford University and his M.D. degree at Stanford University in 1967.

Francis X. Paletta, Jr., M.D., 1035 Bellevue, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Paletta is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1977. He specializes in plastic surgery.

George W. Pogson, III, M.D., 1515 Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Pogson is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1975. He specializes in internal medicine.

Subbarao Polinei, M.D., 6500 Chippewa, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Polineni is a native of India, received his preliminary education at Andhra University and his M.D. degree at Karnatak University in 1969. He specializes in general surgery.

Stephen H. Radinsky, D.O., 141 N. Meramec, Clayton 63105, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Radinsky is a native of St. Louis, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at Kansas City College of Osteopathic Medicine in 1969. He specializes in radiology.

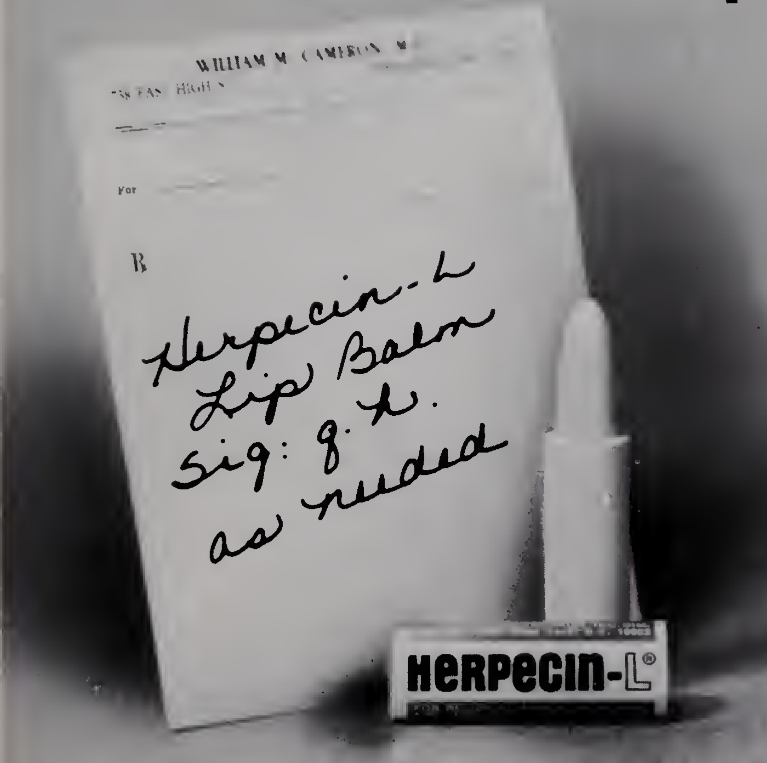
Joseph A. Rappazzo, M.D., Barnes Hospital, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Rappazzo is a native of Baltimore, Md., received his preliminary education at Duke University and his M.D. degree at the University of Maryland in 1979. He specializes in ophthalmology.

Mark S. Saffitz, M.D., 216 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Saffitz is a native of Washington, D.C., received his preliminary education at the University of Rochester and his M.D. degree at the University of Wisconsin in 1974. He specializes in internal medicine.

Richard E. Schrick, M.D., 135 W. Adams, Kirkwood 63112, has become a member of St. Louis Metropolitan Medical Society. Dr. Schrick is a native of St. Louis, received his preliminary education at the University of Missouri-Rolla and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in otolaryngology.

William J. Somerset, D.O., 10 Fieldcrest La., St. Joseph 64506, has become a member of Buchanan County Medical Society. Dr. Somerset is a native of Philadelphia, Pa., received his preliminary education at Seton Hall University and his M.D. degree at Philadelphia College of Osteopathic Medicine in 1974. He specializes in physical medicine and rehabilitation.

Dx: recurrent herpes labialis



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in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-0300

THE AMA'S new 12-story office building in Washington, D.C., which houses the AMA Washington Office and a number of other organizations, was dedicated on April 29. Officials at the dedication ceremony said the building represents the AMA's commitment to the redevelopment of the city. On display at the dedication were the first 73 pieces in the AMA's collection of contemporary American art. Scheduled to be completed over the next two years, the collection is being established to convey the quality and diversity of the commitment of the Association to the public, its membership and its employees. President Reagan congratulated the AMA on its demonstration of "civic responsibility by selecting a location (for the building) that helps advance needed development in the city." He noted that the new building at 1101 Vermont Ave., N.W., "will also facilitate your efforts to display outstanding corporate art programs for visitors and members of the community."

TWO MODEL STATE BILLS prepared by the AMA are designed to help state societies strengthen their state health departments. One bill would create a separate "Department of Health," specify the qualifications and duties of the director, and provide for an "Advisory Health Council." The other model bill, intended for use in amending some state statutes, would require that the director of a state health department be a physician licensed to practice medicine in all of its branches in the state. The AMA has also developed a draft bill to create a separate Department of Health at the federal level. It calls for a cabinet-level department, headed by a physician, that would administer all programs related to health now under the jurisdiction of the Health and Human Services Department. It would also establish a commission to coordinate and reduce duplicative and overlapping federal health programs.

THE AMA asked the U.S. Supreme Court for a rehearing in its appeal of the Federal Trade Commission's ruling on physician advertising. In March the court voted 4-to-4 on the AMA's appeal, thus leaving standing a U.S. Circuit Court of Appeals decision upholding the FTC's 1979 order as modified. Joining the AMA in the petition for rehearing were the Connecticut State Medical Society and the New Haven County Medical Association, both of which were named in the FTC's original complaint.

"PHYSICIAN CHARACTERISTICS AND DISTRIBUTION IN THE U.S." is now available from the AMA. The 1981 edition includes data from the AMA Physician Masterfile on trends in specialty activity, trends in age and specialty of women physicians, and statistics on the specialty, age, board certification and sex of federal and non-federal physicians. It also includes statistics on physicians' specialties and activities by state, county and metropolitan areas. The book costs $30. To order, write Order Dept. (OP-152), AMA, P.O. Box 821, Monroe, Wis. 53566. The handling charge is $2 (UPS, $3). Payment must accompany the order. Residents of Illinois, Wisconsin and New York should add appropriate sales tax to total.

THE AMA'S Fifth National Conference on the Impaired Physician, sponsored jointly with the Oregon Medical Association, will be on September 22-25 in Portland, Ore. Topics will include the physician's health in a changing society, preventing burnout, stress, and medicine's responsibility for impaired physicians. The conference theme is "1972-1992 — A Decade of Progress — A Decade of Promise." For more information, write to the Department of Mental Health, AMA Headquarters.

"PEER REVIEW: A Legal Update," a new AMA publication, provides an overview of the protections afforded through state laws to physicians and other health care professionals who participate in peer review. Cost of the book is $7, plus a $1.50 handling and postage charge. To order, write Order Dept., OP-202, AMA, P.O. Box 821, Monroe, Wis. 53566.

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Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

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in acute exacerbations of chronic bronchitis in adults...
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Before prescribing, please consult complete product information, a summary of which follows:
Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.
For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae.* To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.
For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.
For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.
Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.
Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.
Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.
Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.
Dosage: Not recommended for infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:
Adults. Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.
Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.
For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:
Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS:
Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry-flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. **2.** Data on file, Medical Department, Hoffmann-La Roche Inc.

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* due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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Missouri Medicine

Vol. 79, No. 7 (ISSN 0026-6620) July, 1982

Special Report

124th Annual Convention

Missouri State Medical Association

125th Annual
Convention
March 16-20, 1983
Tan-Tar-A Resort
Lake of the Ozarks

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Missouri State
Medical Association

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314-636-5151
July, 1982

NEWS NEWS NEWS NEWS NEWS Round-Up

AMA award presented to Dean Challoner

David R. Challoner, M.D., dean of St. Louis University School of Medicine, received the 1982 American Medical Association William Beaumont Award in an official presentation on June 13, in Chicago, during the AMA annual House of Delegates convention.

One of the medical profession's most prestigious awards, Dr. Challoner was honored with a $2,500 stipend and a plaque.

Since graduating cum laude from Harvard Medical School, Dr. Challoner has been actively involved in medical research, teaching and clinical practice.

Dr. Challoner is widely known in medical circles for his research in the specialty of endocrinology and metabolism. He has also conducted studies of insulin action in the body and the use of metabolic fuels by the heart.

The Beaumont award was named for an Army physician whose extensive gastrointestinal studies of a French Indian fur trader during the early 1800s led him to publish the first significant scientific information regarding digestive process. The only known portrait of William Beaumont hangs in the dean's conference room at the St. Louis University Medical Center. Dr. Beaumont was the first chairman of surgery at the school of medicine.

Dr. Challoner will be leaving St. Louis this month to assume the office of vice president for Health Affairs at the University of Florida.

William Y. Rial, M.D., AMA president-elect (left), presents the Dr. William Beaumont Award in Medicine to David R. Challoner, M.D., dean of St. Louis University School of Medicine.

Dr. Ritter re-elected to Board of Trustees

Hubert A. Ritter, M.D., a St. Louis obstetrician-gynecologist, was re-elected to the American Medical Association's Board of Trustees, at the association's annual meeting, June 13-17, in Chicago.

On the AMA's 12-member board, Dr. Ritter serves his third three-year term.

A former president of the St. Louis Medical Society and vice president of the Missouri State Medical Association, he was an AMA delegate for two years prior to his election to the AMA board.

For the AMA, Ritter has served as chairman of the Board of Directors of the Education and Research Foundation and is on the Executive Committee of the Board of Directors.

Dr. Ritter is former chairman of the Missouri Political Action Committee and a member of the National Joint Practice Committee.

At the St. Louis University Medical School, Dr. Ritter has been acting chairman of the department of obstetrics and gynecology, from 1976-1978. He is still with the university as a clinical professor in obstetrics and gynecology.

Dr. Ritter maintains his private practice with Ritter-Callaghan Obstetrical and Gynecological Associates, Inc.

Remember
MSMA's Annual Convention
March 16-20, 1983
at
Marriott's Tan-Tar-A
Lake of the Ozarks

May price index shows physicians' fees up

During the month of May, physicians' services rose (0.6%). less than the percentage increases in both the all items component, 1.0%, and the all services component, 1.0%, of the Consumer Price Index.

Also, in May the percentage change in the physicians' services price index (0.6%) was less than the percentage change in the overall medical care price index (0.7%) and the same as the percentage change in the medical care services price index (0.6%).

During the last 12 months (May 1981 through May 1982) the percentage increase in the all services price index (10.7%) exceeded the percentage increase in the physicians' services price index (9.6%), and they both exceeded the percentage increase in the all items price index (6.7%).

Also, over the past 12 months the percentage increase in the medical care services price index (12.4%) exceeded the percentage increase in the overall medical care price index (12.0%) and they both exceeded the percentage increase in the physicians' services price index (9.6%).

Physicians' advertising policies listed

As more physicians become concerned about competition, a greater number are also interested in proper procedures for advertising. Both the Missouri Board of Registration for the Healing Arts and the American Medical Association have rules and policies on the issue.

Rules, governed by the Board of Registration, say that each Missouri Licensed physician may publish or broadcast the following information within the geographical area(s) in which he/she resides, maintains offices or in which a significant number of his/her patients live:

1) Name, including name of medical clinic, and names of professional associates;
2) Address;
3) Medical degrees awarded from the school of graduation;
4) Any AMA recognized specialty and subspecialty;
5) Telephone numbers, including numbers for office, exchange and home;
6) Hospital affiliations;
7) Office hours; and
8) Areas of practice.

According to the Missouri Board of Registration, any of the above information may be displayed on a clinic sign, letterhead, newspaper, or telephone directory. Clinic signs may not exceed four feet by three feet. Newspaper ads cannot be over two columns wide and three inches long.

Announcements concerning retirement, absence, illness, relocation, new office, or death are permissible as long as they are within the size restrictions.

A physician may also advertise this information on television or radio provided that the commercial is performed by the physician.

In addition, section 5.01 of the AMA's *Current Opinions of the Judicial Council*, gives the following policy on advertising and publicity:

> "There are no restrictions on advertising by physicians except those that can be specifically justified to protect the public from deceptive practices. A physician may publicize himself as a physician through any commercial publicity or other form of public communication (including any newspaper, magazine, telephone directory, radio, television or other advertising) provided that the communication shall not be misleading because of the omission of necessary material information, shall not contain any false or misleading statement, or shall not otherwise operate to deceive.
>
> "The form of communication should be designed to communicate the information contained therein to the public in a direct, dignified, and readily comprehensive manner. Aggressive, high pressure advertising and publicity may create unjustified medical expectations. Any advertisement or publicity, regardless of format or content should be true and not misleading.
>
> "The communication may include: (a) the educational background of the physician; (b) the basis on which fees are determined (including charges for specific services); (c) available credit or other methods of payment; and (d) other information about the physician which a reasonable person might regard as relevant in determining whether to seek the physician's services.
>
> "Testimonials of patients, however, as to the physician's skill or the quality of his professional services should not be publicized. Statements relating to the quality of medical services are extremely difficult, if not impossible, to verify or measure by objective standards. Claims regarding experience, competence and the quality of the physician's services may be made if they can be factually supported and if they do not imply that he has an exclusive and unique skill or remedy. A statement that a physician has cured or successfully treated a large number of cases involving a particular serious ailment may imply a certainty of result and create unjusitified and misleading expectations in prospective patients.
>
> "Consistent with Federal regulatory standards which apply to commercial advertising, a physician who is considering the placement of an advertisement or publicity release, whether in print, radio or television, should determine in advance that his communication or message is explicitly and implicitly truthful and not misleading. These standards require the advertiser to have a reasonable basis for claims before they are used in advertising. The reasonable basis must be established by those facts known to the advertiser, and those which a reasonable, prudent advertiser should have discovered.
>
> "As used herein, references to a "physician" applies also to information relating to the physician's group, partners or associates. Any communication or message within the scope of this opinion should include the name of at least one physician responsible for its content."

Dr. Mohammad Akhter departs from the Division of Health

Dr. Mohammad N. Akhter, director of the Missouri Division of Health since November, 1980, informed the MSMA that he is leaving that post effective June 30, 1982.

In his letter, Dr. Akhter expressed his appreciation to the Association for its assistance and support of the Division of Health during his tenure. He requested continued Association support of Division efforts to provide basic public health services to the citizens of Missouri.

Dr. Akhter, who resides in Columbia, previously worked for the Michigan Department of Mental Health as chief of the Division of Emergency Services and medical director of the Division of Health Maintenance Organizations. At this time, his future plans are undecided.

SOURI
TATE
CAL
IATION

Dr. Magness dies at age 84

Guy N. Magness, M.D., a past president of the Missouri State Medical Association, died June 7, 1982 in St. Louis.

Dr. Magness served as MSMA president from 1953-1954. He was director of medical services for the University City schools and was St. Louis' health commissioner from 1952-1981.

Dr. Magness was a member of the staff at St. Luke's Hospital for 50 years and once was its president. In addition he was president of the St. Louis County Medical Society in 1953.

Dr. Magness received the St. Louis College of Pharmacy's Physician of the Year Award in 1975 and the Washington University Founders Day alumni award in 1969. He was graduated from the university's medical school in 1928.

ad·dic·tion

/ a'dik-shen / 1. Compulsive physiological need for alcohol. 2. In preliminary examinations, could be diagnosed as nervous condition. 3. Arrested through effective alcoholism treatment.

Chances are, during a patient's preliminary examination, alcoholism is not one of your immediate suspicions. But with 10 million Americans suffering from this disease, and over 100,000 in the Kansas City area alone, perhaps it should be. Or perhaps the drinking problem is someone within your patient's family, causing them mental and even physical abuse.

At Bethany Medical Center's Alcoholism Rehabilitation Department (ARD), our professional counselors offer both in- and outpatient programs for individuals suffering from alcoholism.

Our outpatient program is for those individuals whose affliction has not become debilitating, but recognize the need for treatment. It is specifically tailored to the individual's needs and incorporates family involvement.

Our inpatient program covers a 28-day phased treatment in a professional, yet unusual and cheery environment. Patients wear street clothes and participate in a busy, structured, daily routine that includes exercise, counseling, lectures and recreational time.

If you have a patient with a drinking problem, send for our detailed informational brochure, or personally contact one of our professional counselors. Inpatient information: Sue Little, Director, Bethany Medical Center, 51 North 12th Street, K.C., KS. 66102. (913) 281-8951. Outpatient: Paul Anderson, Ph.D., Family Institute of Addiction Treatment, 7840 Washington Ave. Suite 300, K.C., KS 66112. (913) 334-6300.

Alcoholism
Rehabilitation
Department

BMC

Bethany Medical Center

Missouri State Medical Association

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References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

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Today, INDERAL—instead of methyldopa, instead of reserpine.

INDERAL exhibits few of the disturbing side effects of methyldopa and reserpine. Sedation, depression, and impotence are rare.* Tolerance is not likely to occur, as it frequently does with methyldopa. For the vast majority of patients—INDERAL means a step toward improving the quality of life. (INDERAL should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.)*

INDERAL blocks beta-receptor sites *in the heart* to reduce heart rate and cardiac output—reducing cardiac work load—sparing an overburdened heart.

Hypertensive hearts can rest easy with INDERAL. For many—it is ideal, first-step therapy.

INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

INDERAL®

(PROPRANOLOL HCl) B.I.D.

The sooner, the better.

*Please see following page for Brief Summary of Prescribing Information.

THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

INDERAL®

(PROPRANOLOL HCl)

B.I.D. FOR HYPERTENSION

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
Inderal® BRAND OF **propranolol hydrochloride A beta-adrenergic blocking agent**

> BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG.

CONTRAINDICATIONS

INDERAL is contraindicated in: 1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect. The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, e.g., isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

USE IN PREGNANCY: The safe use of INDERAL in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic. Dosage may be increased gradually until adequate blood pressure is achieved. The usual dosage is 160 to 480 mg per day. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval. This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day. If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control.

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies.

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BRADYCARDIA—ADMINISTER ATROPINE (0.25 to 1.0 mg). IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY.

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS.

HYPOTENSION—VASOPRESSORS, e.g., LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE).

BRONCHOSPASM—ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE.

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No. 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 462—Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 464—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 468—Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

INJECTABLE

No. 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with citric acid. Supplied as 1 ml ampuls in boxes of 10.

Reference: 1. Freis, E.D.: Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981. **7997/482**

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Editor's Corner

A little while back, an octogenarian was referred in to our office from a rural area with trouble swallowing and breathing. The obstruction proved to be a large benign cyst that was summarily dispatched within 12 hours' hospitalization. The oldster had been living an active and satisfactory life, had never taken medicine, didn't know what medical insurance was, and had never darkened the door to a doctor's office in his life. He was ready to go home within another day, but a problem arose. A "SMA-19" had been ordered, and the page of laboratory results was back in the chart. With an asterisk beside each abnormal laboratory result, the sheet of paper looked like a display of shooting stars — there was scarcely a normal reading to be found.

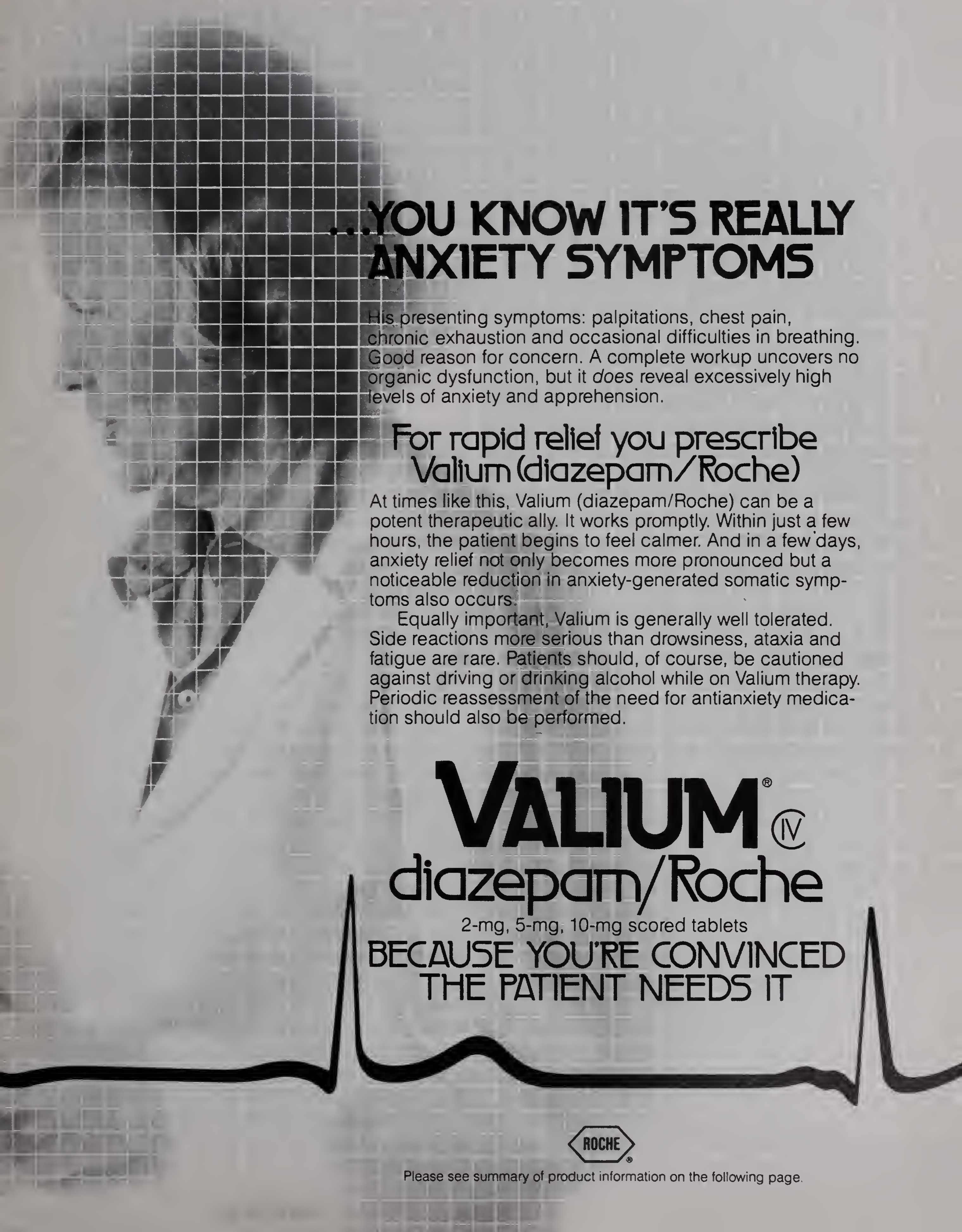
There then was a dilemma. The hospital stood full of shiny diagnostic equipment. All sorts of bright-faced specialists and subspecialists were available. This physician made his decision. The old gentleman was sent home, post haste, still financially solvent, with a letter to his family doctor indicating the problem that had been solved and the potential problems not dealt with.

The handling of this case can, of course, be criticized, but it brings up the problems doctors increasingly have in trying to separate what *could* be done for a patient from what *should* be done. Over-operating on patients has long been condemned, and improved education and physician self-policing have had their effect. But, what about the myriad laboratory tests, medicines and referral opinions available at the stroke of a pen? Does every person with a headache need a CAT scan? Do dizzy patients all deserve automated brain wave tests? Is the nuclear laboratory with its sophisticated procedures being used enough? The decisions to be made would be complicated enough if the options available were free, but one must note the high costs of some of the newer tests (priced a la carte), supplies (disposable and not reusable, naturally), and diagnostic equipment (has to be paid off before it becomes obsolete in another two years).

To put it in a phrase: The knowledge and technology explosion is here. It's wonderful, it's hard to keep up with, and it's expensive. We're all going to have to rely on some common sense — one subject not taught in medical schools — to help us pick and choose among the available diagnostic and therapeutic modalities. What could and should be done for a patient were one and the same 50 years ago. Now, the possibilities far outnumber the practicalities. Dealing with this fact seems to be a Number One challenge for the 1980s.

Jordan W. Burkey, M.D.

THE PATIENT THINKS
HE HAS HEART TROUBLE...



...YOU KNOW IT'S REALLY ANXIETY SYMPTOMS

His presenting symptoms: palpitations, chest pain, chronic exhaustion and occasional difficulties in breathing. Good reason for concern. A complete workup uncovers no organic dysfunction, but it *does* reveal excessively high levels of anxiety and apprehension.

For rapid relief you prescribe Valium (diazepam/Roche)

At times like this, Valium (diazepam/Roche) can be a potent therapeutic ally. It works promptly. Within just a few hours, the patient begins to feel calmer. And in a few days, anxiety relief not only becomes more pronounced but a noticeable reduction in anxiety-generated somatic symptoms also occurs.

Equally important, Valium is generally well tolerated. Side reactions more serious than drowsiness, ataxia and fatigue are rare. Patients should, of course, be cautioned against driving or drinking alcohol while on Valium therapy. Periodic reassessment of the need for antianxiety medication should also be performed.

VALIUM® Ⓘⓥ

diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets

BECAUSE YOU'RE CONVINCED THE PATIENT NEEDS IT

ROCHE®

Please see summary of product information on the following page.

VALIUM®(diazepam/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

> **Usage *in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
How Supplied: For oral administration, Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100* and 500;* Prescription Paks of 50, available in trays of 10.* Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25,† and in boxes containing 10 strips of 10.†

*Supplied by Roche Products Inc., Manati, Puerto Rico 00701
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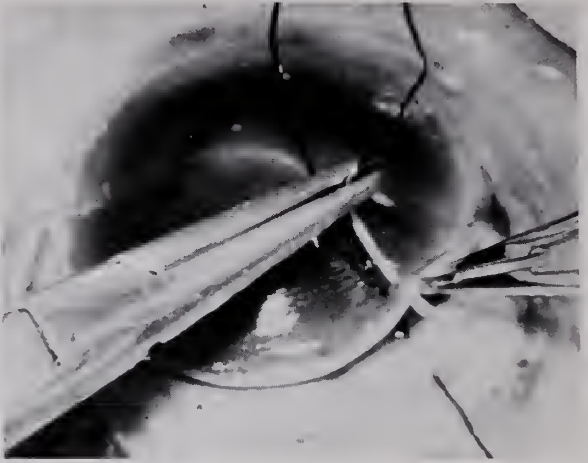

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MICROSURGICAL WORKSHOP: ECCE AND POSTERIOR CHAMBER LENS IMPLANTATION

AUGUST 7-8, 1982

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N/C	RESIDENTS-IN-TRAINING

Saturday Workshop

$75.00	PRACTICING OPHTHALMOLOGISTS
$10.00	RESIDENTS-IN-TRAINING

Sunday Workshop

$75.00	PRACTICING OPHTHALMOLOGISTS
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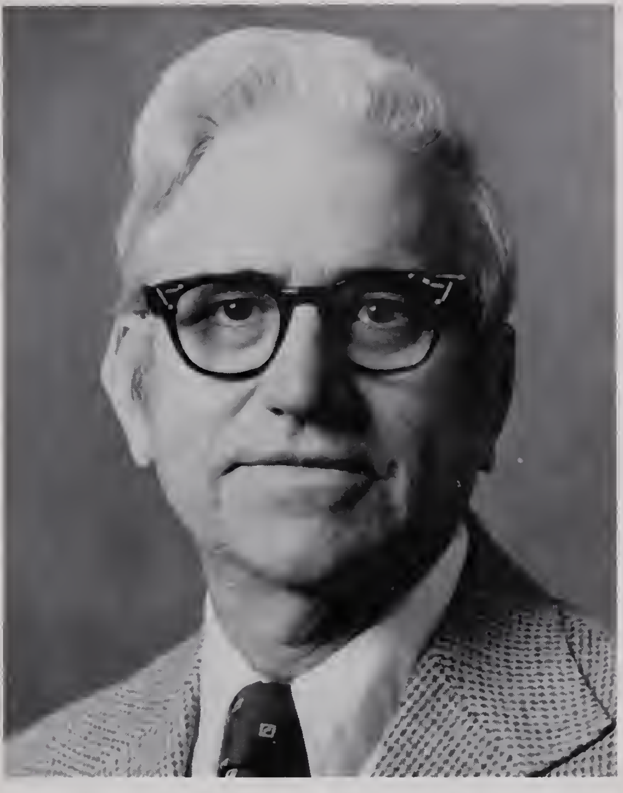
7.0 CME HOURS

ADDITIONAL INFORMATION: MS. MAVIS COOPERMAN, BETHESDA EYE INSTITUTE, 3655 VISTA AVE., ST. LOUIS, MO 63110. TEL: (314) 772-9200, EXT. 395.

Remarks of Eugene T. Hansbrough, M.D. President



Mr. Speaker, Dr. Coury, Delegates, Fellow Members, Auxilians and Guests:

I want to thank this House of Delegates, the Council, staff and all physicians in Missouri for having me as your president during the past year. It has been an enjoyable year for me and I hope the Association's business has not suffered to a great degree.

During the years I have been a member of the Council and continuing as president, among the greater objectives I have had in mind and would like to see put into effect is that any sick person can get treatment by any physician in the state. I realize how difficult this is in some places and it is not practical. I believe, however, that we have seen some improvements, such as in Medicaid payments, and have reached a time perhaps when Medicaid care is not an economic disaster. This is especially true for physicians in an unincorporated practice who, at the present time, may accept in place of fees from Medicaid, deferred payments into a fund and pay tax on them only after retirement. I feel that this should be thoroughly investigated by each doctor in this state whose unincorporated status would allow it. I think that we as physicians need to devise means to insure that all patients can get treatment in this state or, indeed, we may see legislative measures such as requiring acceptance of all types of patients as a requirement for licensure, a measure that would, of course, disturb all of us.

Also, during the years I have been on the Council, I have felt a major issue was the entry of people into the practice of medicine who were not trained to practice medicine. When we talk about this, everyone seems to think we are trying to keep people from doing things for which they have been trained. Certainly, anything that is legislated for a person to do, I am for. This is the democratic system. But I think Missouri can be proud of the fact that many of the ancillary people are not licensed to practice in the state of Missouri. Also, I realize that in many cases, many physicians disagree with this because they feel that physicians' assistants should be allowed to do things that are simply illegal in this state. The beginning of physicians' assistants was in the era when we were short of doctors. This is rapidly coming to a halt. I feel that many young men and women who have entered this field will be left with a bleak future if the number of physicians continues to increase at the rate we have had the last few years.

I would like to comment on legislation only by saying that I am amazed at how hard working and

(Continued on page 388)

Remarks of John I. Matthews, M.D. President-Elect

Mr. Speaker, Dr. Coury, Members and Guests:

Thank you for the honor and privilege of addressing this House of Delegates as president-elect. This ranks as one of the most effective state medical associations in the nation, and we can all be proud of being a part of it. As is traditional, I will attempt to outline a program for the coming year as the 124th president-elect.

First a few general recommendations. Now that we have achieved proportional medical representation in the House and Council, we must seek balance of all age groups in the House, on the Council and in our AMA Delegation. We need all age groups, but I would emphasize that we must recruit younger people vigorously. We need men and we need women. In the near future, as we are all aware, approximately 30% of medical school graduating classes will be women. They must play an increasing role in this organization. However, young physicians and women physicians will not be here unless county medical societies put them here. With these thoughts in mind, the Council has made recommendations to me for state committee appointments this year.

The MSMA Auxiliary is the strong right arm of the Missouri State Medical Association. It has been said that if their enthusiasm doesn't turn you on, you just lack the switches. In any event, they deserve our support. I know you will want to attend their Auction being held tonight. I would urge that physicians pay the dues to this organization for their spouses through their office as a tax deductible expense. Furthermore, I am appointing a member of the Auxiliary to the Legislative Committee of this Association at this session in recognition of the support they have given in this area in the last several years.

Several county societies are sending their presidents-elect to the AMA Leadership Conference held each year in Chicago. Those that are not, should consider the benefits of this procedure.

This is a political year. In November, Missouri will elect a senator, all members of the House of Representatives of Congress, all members of the Missouri House of Representatives and one half of the state senators. It is a prime time to develop clout in the political arena. Support the candidates of your choice in the primary election that is coming up in August. It is an excellent opportunity to develop a key contact relationship with a promising political candidate. I want to thank Dr. Walter German and the MSMA staff for their efforts in the area of the Key Contact Program. I also want to thank the many Key Contacts who have labored on behalf of the organization. They are identified at this meeting by a special pin on their identification badge. Please take the time to personally thank them.

Join the Missouri Medical Political Action Committee and AMPAC. Become a 99+ member by giving a combined total of $100 to these two fine organizations. They open doors. They get Medicine's message to those with whom it counts.

Legislative breakfasts utilizing the executive committee of the local medical society two or three times each Legislative Session are an informal, low-key way of keeping contact with legislators and with the issues of the legislative year. This greatly facilitates the efforts of the organization in the Legislature, both state and national. A few county medical societies do this at the present time. We urge others to initiate such a program. In urban areas, a district by district approach might prove suitable.

In addition to these general suggestions, I would like to make several specific proposals.

1. *Monitoring HMOs, IPAs and other new forms of practice*. What are the dimensions of these various forms of practice in our state? How successful are they? We need to know some specifics in order to respond intelligently to the changing situation. Resolution #2 from Cole County Medical Society in your Handbook addresses this situation.
2. *We need to increase our efforts to immunize children*. This proposal was aired at the Planning Committee this year and later spelled out in Resolution #14 in your Handbook, which was developed by the Division of Health. The basic premise of prevention vs treatment is a keystone of modern medicine.
3. *Practice Management Workshops*. We have had Practice Management Workshops for years for new physicians about to enter practice. What is proposed here is that similar workshops be developed for seasoned practitioners facing heavy competition from an increasing concentration of physicians and various new forms of practice, such as HMOs. As the Oregon Medical Association refers to this type of workshop, "What to do when the guppies in your waiting room aquarium are dead, the plastic ferns are dusty and the covers are missing from the 1977 *National Geographics*." This concept was approved by the MSMA Council at its December, 1981 meeting. It needs to be implemented at this time. Competition is a buzz word being used in the Congress and is being spelled out in specific legislative proposals. It is apparent, though, that competition is here now and growing even without legislative action.
4. *Health Planning*. With the demise of the HSAs, medicine has the opportunity to step into this vital area and show that physicians are interested in proper health planning. I am hopeful local medical societies and individual physicians will provide expertise and leadership so that responsible planning can be carried out with a minimum of governmental interference. It is my understanding that the Cape Girardeau Area County Medical Society has already volunteered to take on this responsibility in its area.
5. *A Coalition for Health Care sponsored by the MSMA*. The AMA has been working in this area for the past few years. In the December Interim Session of the AMA, the House of Delegates approved this concept. The AMA is now working jointly with the American Hospital Association, Blue Cross/Blue Shield, business round table, AFL-CIO and the insurance industry to further develop this concept. Preliminary efforts are now going forward in St. Louis, Kansas City and Springfield and a statewide effort is needed. The general concept is outlined in Resolution #4 in your Handbook. You are urged to attend the Reference Committee hearing on this proposal.
6. *Block Grants Developments*. Block grant developments will be watched closely by the Association and a determined effort will be made to see that health care is given its fair proportion of these funds. We are all aware that welfare is not health care, but that distinction is not clear in the minds of many.
7. *Medical School Liaison Committee*. As is well known to all, government support to medical education and medical research is being drastically reduced. Medical schools must seek new funding. As indicated in the resolution adopted by the MSMA Council yesterday, it will be in the mutual interest of all if joint planning can be entered into.
8. *Dues*. The MSMA Finance Committee has recommended and the Council approved a $10 increase in dues beginning in January,

> 1983. As emphasized by our treasurer, Dr. Carol Williams, this is a "stand pat budget" accounting only for inflation. With the addition, dues will be $125 per year and still the lowest of all 50 states. As a corollary, the MSMA Council proposes a planning seminar for the late summer to look into the future and to develop objectives and programs with appropriate levels of budgeting. A high priority item that will be reviewed is a full-time director for the Impaired Physician Program. When one considers that in just a three-month period this winter we lost five doctors to suicide, the scope of that program becomes apparent. Our dedicated committee on the Impaired Physician, headed by Dr. David Ohlms, needs your help and support. It is incumbent on you and me to recognize when one of our colleagues needs help and to get him that assistance.

Just one moment for a philosophical concern. When I was a medical student and house officer, my peers and I were constantly reminded that the practice of medicine is a privilege and not a right. In recent months, I have talked with several younger physicians who have never heard that concept articulated. Although the prestige of the profession remains high, it is not as high in the public estimation as it once was. A cherished trust and privilege that we have, but a right we have not. Our efforts must reflect the difference and our colleagues must be made aware of it.

At the top of this presentation, it was noted that this is one of the most effective state medical associations in the country and that is no accident. You have hardworking officers, an alert and aggressive Council and a Committee and Commission structure that functions well because of the efforts of the physicians involved. In my opinion, our dedicated staff, headed by Royal O. Cooper, is second to none. They are our greatest asset. I want to thank Dr. Dick Bradley for his untiring efforts on behalf of MOMEDICO during the past 12 months and Dr. Gene Hansbrough for his outspoken and forthright leadership of the Association. Dr. Wilfred Wooldridge has made an outstanding contribution as editor of the Journal and deserves our warmest thanks. We have a great ally in Dr. Mohammad Akhter, the Director of the Division of Health, and I want to thank him on behalf of the Association.

In closing, let me say that most of what has been outlined above can be accomplished at this meeting. Of course, no program is accepted by the House without critical appraisal, debate and change nor should it be. That is expected. Much of what remains can be implemented by local option of county medical societies. There is some cost involved, but this is not an expensive program. The Program Committee with Dr. William Bradshaw as chairman has developed an excellent scientific program from which we all will profit by attending. Overall, the 124th Annual Session has the potential of being one of our finest meetings.

Remarks of Eugene T. Hansbrough, M.D.

(Continued from page 385)

effective the MSMA staff is in this field. A special thanks goes to our incoming president, who appears at many hearings before the House and Senate in Jefferson City that you and I never hear about and presents the Association's position in a most effective manner.

There has been a lot of talk about physicians not belonging to the AMA and I am sure there are some of you here who don't belong. Your medical organizations are the best financial investment that you have ever had. In spite of the AMA dues increases, you still have a bargain. Remember, the AMA is the only medical organization that Congress asks to come and give them information. All of our other organizations have to ask Congress to allow them to provide information. There is a great deal of difference in reception of information between those two statuses. I think you all understand this. Your investment in MMPAC also reaps the same reward, and I really cannot see why any physician in Missouri does not support MMPAC at least at the $40 level. I really believe there is no effective way to show all of you the positive results we obtain from PAC.

And lastly, continue to support your patients. Medicine is a very peculiar field in that we are in servitude to our patients. A very peculiar situation for a highly technically trained person, but it is true. I am sure that availability to your patients is not a lost art. We are seeing many forms of medicine develop, such as the one-stop centers. It is my belief that if a patient could get his own physician, he would have no desire to go to a quick clinic, whose records-in-depth and care certainly cannot be on the same level as that in a doctor's office. Let's get those doctors practicing with us or in our town. Let's all give patients good service along with good care.

Report of Mrs. Jerry Meyer, President of the MSMA Auxiliary

Mr. Speaker, Dr. Hansbrough, Dr. Coury, Members of the House of Delegates, and Guests:

One year ago, I selected for my theme, "Then give to the world the best you have, and the best will come back to you." I truly believe that by giving of oneself to others, whether through Auxiliary work or everyday life, we as individuals are the ones who gain.

This year, I have had three areas of interest. The legislative telephone contact system was introduced at our Fall Conference. I hope that this is helping to get the word out faster when legislative action is needed.

The third phase of the American Medical Association Auxiliary "Shape Up for Life" theme was on stress. A program was presented at our Fall Conference and some auxiliaries have presented programs on this area during the year.

Child auto safety restraints are important to all of us, whether we are parent, grandparent, relative or friend. The new child restraint pamphlets have been drawn and printed for us by the Missouri Division of Health. These pamphlets are to be placed in hospital packets for the mothers of newborns and also in physicians' offices. This information, hopefully, will instruct parents about the use and importance of auto safety restraints for children up to the age of five. Pamphlets are on hand at this convention for anyone who is interested.

Membership is a constant area of our work. This year, I issued a challenge to the president of the Kansas Medical Society Auxiliary based on the greatest number of members by national convention. I hope this has been an incentive to county auxiliaries to increase their membership.

I have been very privileged this year to visit all of the 22 county medical societies auxiliaries and the resident physician medical student spouse group at Baptist Memorial Hospital in Kansas City. I have enjoyed the opportunity to visit in the local auxiliary surroundings and see first hand how the auxiliary operates and the feeling of auxiliary friendship.

The MSMA and its Council have been very supportive this year as always. Mrs. Lillian Gaston and I attended the meetings of the MSMA Council and I had the opportunity to give an auxiliary report each time. The council has been especially interested in the child restraint pamphlets and suggested that we place them in physicians' offices.

As my theme stated, I have given my best this year, whether it was adequate in all areas or not. But, most important, I feel that I have grown as an individual and the best has truly come back to me.

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Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F (15°-30°C)

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* *Meeting of Am Soc Colon/Rectal Surgeons, May 1980.*

** *Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.*

† *1981 data from leading marketing research organization.*

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Annual Convention 1982

MISSOURI STATE MEDICAL ASSOCIATION

Eugene T. Hansbrough M.D.,
Poplar Bluff
President

Distinguished guest speakers and the MSMA and Auxiliary officers always add an important dimension to every Annual Convention. Dr. Hansbrough, Dr. Matthews and Mrs. Meyer are shown as they addressed the First Session of the 1982 House of Delegates.
The Honorable Ike Skelton of Lexington, U.S. Representative for the Missouri Fourth Congressional District, addressed the MSMA and Auxiliary members at the Auxiliary's annual Public Affairs Breakfast. Dr. Meyer, speaker, opened the First Session of the Convention.

John I. Matthews, M.D.,
Jefferson City
President-Elect, MSMA

Mrs. Jerry Meyer
Concordia
President, MSMA Auxiliary

The Honorable Ike Skelton
U.S. Representative, Missouri's
Fourth Congressional District

John J. Coury, M.D.
Port Huron, Mich.
Vice-Chairman, AMA
Board of Trustees

Jay Meyer, M.D.
St. Louis
Speaker, House of Delegates

1982-1983 Officers, AMA Delegates and Councilors Elected

At each Annual Convention, the House of Delegates elects its officers and AMA Delegates and Alternate Delegates. The MSMA Council elects the councilors and vice-councilors. Those elected this year but not pictured include the following: Vice-President *O. A. Griffin, Buffalo;* Vice-Speaker *Barbara Buchanan, Kansas City;* AMA Delegates *Hugh E. Stephenson, Jr., Columbia, Francis X. Lieb, St. Louis and George M. Bohigian, St. Louis;* AMA Alternate Delegates *Richard V. Bradley, St. Louis and Richard P. Bowles, Liberty;* Councilor *Frederick D. Peterson, Third District; and* Vice-Councilors *Gary A. Dyer, First District; Gerard Callaghan, Third District; and O. Martin Hasek, Ninth District.*

(Left to right) **Immediate Past-President Eugene T. Hansbrough, Poplar Bluff; President-Elect Irving H. Clark, Kansas City; President John I. Matthews, Jefferson City; Vice-President Byron E. Watts, Jefferson City; and Vice-President Vernon E. Balster, St. Louis.**

(Left to right) **Councilor Marvin A. Singleton, Eighth District; Vice-Councilor Francis M. Corry, Eighth District; Councilor H. Peter Ekern and Vice-Councilor Alan H. Braun, Fifth District; Councilor Richard C. Hedges, First District; and Councilor Jack Wiles, Ninth District.**

(Left to right) **Councilor Ronald A. Youmans, Seventh District; Vice-Councilor James P. Hopkins, Seventh District; and Councilor Milton B. Ozar, Seventh District.**

(Left to right) **Speaker of the House of Delegates Jay Meyer, St. Louis; Treasurer Carol F. Williams, St. Louis; Secretary B. A. Moranville, Columbia; and Chairman of the MSMA Council, James M. Stokes, St. Louis.**

Councilors J. Otto Lottes *(left)* and Theodore L. Paletta, Third District.

Student Vice-Councilor Tom Reardon, Kansas City *(left)*, and Student Councilor Tim Harwood, Columbia.

Annual Banquet

in honor of MSMA Past-Presidents

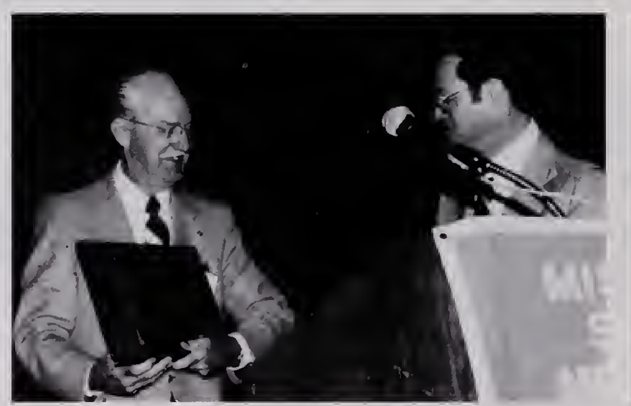
The annual banquet on Saturday of the annual session is always an exciting event. The new and retiring MSMA presidents and the past-presidents in attendance are honored and members who have completed 50 years in the practice of medicine receive special recognition. The banquet provides that special opportunity for members and guests to relax, enjoy a fine dinner, visit with old and new friends and dance to the music of a "big band."

Incoming President John I. Matthews *(right)* accepts the traditional gavel of office from retiring President Eugene T. Hansbrough.

Dr. Hansbrough then accepted a special plaque of appreciation from President Matthews on behalf of the MSMA.

Mrs. Hansbrough joins Dr. Hansbrough for the plaque presentation.

MSMA Members Receive Special Recognition



Durwood G. Hall, M.D. of Springfield was honored as the recipient of the MSMA's first award for Citizenship and Community Service. Dr. Hall, a longtime member of the MSMA, served six consecutive terms in the U.S. Congress.

Wilfred E. Wooldridge, M.D., Springfield, was the featured speaker at the General Session of the 1982 Annual Convention. As retiring editor of Missouri Medicine, he also received a special plaque in appreciation of his outstanding service to the journal.

R. E. Kelly, M.D.,
St. Louis

John H. Post, M.D.,
Washington

George W. Winn,
M.D.,
Boonville

William H.
Grundmann, M.D.,
St. Louis

William H. Bailey,
M.D.,
St. Louis

MSMA Members Receive 50-Year Pins

Members of the Missouri State Medical Association who have completed 50 years in the practice of medicine are honored at the Presidents' Banquet each year.

Sixteen of the 47 members who attained this distinguished accomplishment in 1982 are pictured here at the time they received their 50-Year Pins and congratulations from Pres. Eugene T. Hansbrough on behalf of the MSMA.

Members who received their 50-Year Pins but did not attend the Banquet are Drs. Lauren V. Ackerman, Setauket, N.Y.; Willard M. Allen, Baltimore, Md.; Desider B. Ecker, Pacific; Royal C. McLean, Kirkwood; Harry Agress, Joan M. Goebel, William H. Meinberg, Bonaventue C. Portuondo, Edith C. Robinson, Henry G. Schwartz, Conrad S. Sommer, Raymond C. Sundermann, Barrett L. Taussig and Helman C. Wasserman, all of St. Louis; M. D. Curran, Jacob S. Hoffman, Helen Kingsbury, and Jesse W. Young, all of Kansas City; Harmon U. Sanders, Greenwood, Miss.; Marvin W. Morse, St. Joseph; Edgar A. Belden, Jefferson City; Benjamin P. Eisenmann, New Haven; R. H. Staton, Carrollton; William P. Maddux and Don J. Silsby, Springfield; Virgil E. Jeans, Joplin; Frank T. Kerr, Monett; Arnold G. Shirey, Hayti; C. G. Staffachner, Sedalia; Charles A. McBurney, Slater; and Benjamin E. Greenberg, Forsyth.

Claude W. Cooper, M.D. of Thayer *(right)* receives his 50-year pin from President Hansbrough.

John H. Platz, M.D.,
Carrollton

Irving A. Wien, M.D.,
Kansas City

Ernest E. Wadlow,
M.D.,
St. Joseph

Clint L. Miller, M.D.,
Kansas City

Bela K. Kent, M.D.,
Kansas City

Lawrence F. Steffen,
M.D.,
Kansas City

James O. Smith,
M.D.,
Clinton

Oliver F. Duffy,
M.D.,
Trenton

Raymond A. Ritter,
Sr., M.D.,
Cape Girardeau

Samuel J. Byland,
M.D.,
Wellsville

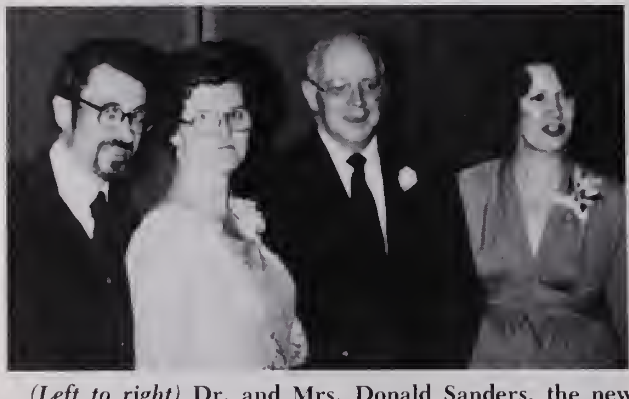
The MSMA Auxiliary

The annual convention of the MSMA Auxiliary is always held concurrently with the MSMA Annual Convention. Special activities include the MSMF/AMA-ERF Annual Benefit Auction, Public Affairs Breakfast, Friday luncheon honoring the MSMA presidents and Advisory Council, Installation Luncheon and a reception honoring the retiring and newly-installed auxiliary presidents.

Mrs. Jerry Meyer, retiring president *(left)*, presents the official president's pin and gavel to Mrs. Sam L. Gaston, MSMA Auxiliary president for 1982-1983.

Mrs. Gaston's proud family attended her installation as MSMAA president. *(Left to right)* Husband Sam L.; Mrs. Gaston; Robert Gaston, M.D.; daughter Susan Tarvin; son-in-law Tim Tarvin; and daughter Laura.

Retiring MSMA President Eugene T. Hansbrough *(left)* and Incoming President John I. Matthews *(right)* were honored guests and visited with Mrs. Meyer and Mrs. Gaston at the Friday luncheon.



(*Left to right)* Dr. and Mrs. Donald Sanders, the new president-elect, with Dr. and Mrs. Sam Gaston, Auxiliary president, receive guests from the Missouri State Medical Association and Auxiliary at the Auxiliary's annual reception.

Mrs. Torrence P. B. Payne of Newburgh, N.Y., president-elect of the AMA Auxiliary *(left)*, with Mrs. Meyer and Mrs. Gaston. Mrs. Payne addressed the House of Delegates of both the Medical Association and Auxiliary.

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J-9043-4 July 1981

In the treatment
of insomnia

Good mornings start with restful nights.

Dalmane *(flurazepam HCl/Roche)* patients fall asleep faster, sleep longer and seldom awaken with morning hangover.

Feeling well rested in the morning usually means having slept well the night before. And for insomniac patients receiving hypnotic therapy, a good morning also means awakening with few side effects from their medication. Many physicians choose Dalmane for their patients who suffer from insomnia for this very reason.

Aside from enabling patients to fall asleep more quickly and sleep longer, Dalmane seldom causes morning hangover. Most Dalmane patients feel alert and refreshed when they awaken. In 53 paired-night clinical studies comparing Dalmane and placebo in 2010 insomniac patients with a variety of secondary diagnoses, most Dalmane patients awakened more alert and refreshed, and less groggy and drowsy, than on nights when they had taken only placebo.[1] In a double-blind crossover study of 42 patients in private practice, approximately three times as many patients reported feeling refreshed and alert upon awakening after a night on Dalmane (flurazepam/Roche) compared to placebo nights.[2] This difference was highly significant ($p<0.001$). And a retrospective study of 2542 hospitalized patients who received Dalmane revealed only a 3.1% incidence of side effects.[3]

While residual effects from Dalmane therapy are infrequent, patients should be cautioned about drinking alcohol, driving or operating hazardous machinery after ingesting the drug.

Efficacy and safety in a broad range of patient types.

Over 2000 clinical trials involving more than 10,000 patients have shown that Dalmane patients fall asleep sooner, sleep longer and experience fewer nocturnal awakenings.[4] The safety and efficacy of Dalmane have been demonstrated in medical and surgical hospitalized patients, in patients seen in office practice and in elderly patients.[5-8] Since the risk of oversedation, dizziness, confu-

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Contemporary Hypnotic Therapy '82

sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

Avoids rebound insomnia upon discontinuation.

Rebound insomnia—a worsening of sleep beyond pretherapy levels after drug discontinuation—has been reported as a potential clinical problem with some hypnotics.[9,10] However, this problem has not been reported with Dalmane. In eight out of eight sleep laboratory studies, there were no reports of rebound insomnia.[11] When you prescribe Dalmane, you can be confident of efficacy that enhances therapeutic progress. Your insomniac patients can be assured of a restful night, night after night—a good start for a good morning.

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **4.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Meyer JA, Kurland KZ: *Milit Med 138*:471-474, Aug 1973. **6.** Feffer HL, Gibbons B: *Med Times 101*(8):130-135, Aug 1973. **7.** Jacobson A *et al: Psychophysiology 7*:345, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 1978. **10.** Kales A *et al: JAMA 241*:1692-1695, Apr 1979. **11.** Monti JM: *Methods Find Exp Clin Pharmacol 3*(5):303-326, 1981.

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Please see following page for summary of product information.

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15-mg/30-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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124th Annual Convention

MISSOURI STATE MEDICAL ASSOCIATION

House of Delegates

Hyatt Regency Hotel — Kansas City

April 1-4, 1982

This report of the 1982 MSMA Annual Session held at the Hyatt Regency Hotel in Kansas City is designed to provide each member with a concise but complete summary of the meeting and the actions taken by the House of Delegates. The minutes of this session are available to members of the MSMA at the Headquarters Office in Jefferson City.

FIRST SESSION

The First Session of the House was called to order at 10:30 AM on April 1, 1982 in the Regency New York A & B Rooms with Jay Meyer, M.D., presiding. The following officers and delegates were present during the 124th Annual Convention.

OFFICERS

President	E. T. Hansbrough, Poplar Bluff
President-Elect	John I. Matthews, Jefferson City
Vice-President	Charles P. McGinty, Cape Girardeau
Vice-President	George M. Bohigian, St. Louis
Vice-President	Donald E. McIntosh, Kansas City
Secretary	B. A. Moranville, Columbia
Treasurer	Carol F. Williams, St. Louis
Speaker of the House	Jay Meyer, St. Louis
Vice-Speaker of the House	Barbara Buchanan, Kansas City
Immediate Past-President	Richard V. Bradley, St. Louis

COUNCILORS

1st District	Richard C. Hedges, North Kansas City
3rd District	Thomas J. Cooper, St. Louis
3rd District	Richard H. Fallon, St. Louis
3rd District	James M. Stokes, Chesterfield
3rd District	Robert R. MacDonald, Jr., St. Louis
3rd District	J. Otto Lottes, St. Louis
3rd District	Theodore L. Paletta, St. Louis
4th District	William R. Richardson, Union
5th District	H. Peter Ekern, Mexico
5th District	Alan L. Braun, Jefferson City
6th District	A. J. Campbell, Sedalia
7th District	Irving H. Clark, Kansas City
7th District	Donald E. McIntosh, Kansas City
7th District	Ronald A. Youmans, Kansas City
7th District	Larry G. Piepergerdes, Kansas City
8th District	Walter A. German, Springfield
8th District	Marvin A. Singleton, Joplin
9th District	Jack Wiles, West Plains
10th District	George H. Ladyman, Poplar Bluff
Student Councilor	Kim Webb, Columbia

VICE-COUNCILORS

1st District	Gary A. Dyer, St. Joseph
2nd District	Robert V. Tompson, Moberly
3rd District	Gerard M. Callaghan, St. Louis
6th District	Jerry Meyer, Concordia
7th District	Milton B. Ozar, Kansas City
9th District	O. Martin Hasek, Mountain Grove
10th District	Melvin C. Kasten, Cape Girardeau
Student Vice-Councilor	Tim Harwood, Columbia

DELEGATES

First District

Andrew	Donald R. Frey, Savannah
Buchanan	Gary A. Dyer, St. Joseph
Buchanan	Orlyn O. Lockard, St. Joseph
Buchanan	B. H. Moen, St. Joseph
Buchanan	Ernest E. Wadlow, St. Joseph
Clay	Richard P. Bowles, Liberty
Clay	Donald A. Fakhoury, Kansas City
Clay	John C. Hagan, N. Kansas City
Clay	Donald E. Kuenzi, Kansas City
Clay	Truman B. Schertz, N. Kansas City
Clay	William D. Soper, Liberty
Clay	David E. Wilson, Kansas City
Clinton	Paul Luckenbill, Plattsburg
Grand River	Joseph Conrad, Chillicothe
Grand River	Albert Cross, Trenton
Grand River	John Dixon, Brookfield
Grand River	Edward Nixon, Gallatin
Grand River	John Platz, Carrollton
Northwest	Edward Bare, Tarkio
Northwest	P. B. Harr, Maryville
Northwest	Frank Matteson, Grant City

Second District

Chariton-Macon-Monroe-Randolph	J. E. Campbell, Macon
Marion-Ralls-Shelby	M. J. Bukstein, Hannibal
Marion-Ralls-Shelby	Carl Kruse, Palmyra
Marion-Ralls-Shelby	Edward Plowman, Hannibal
Pike	John W. Middleton, Louisiana

Third District

St. Louis	Ulises Alvarez, St. Louis
St. Louis	Luis B. Anglo, St. Louis
St. Louis	Vernon H. Balster, St. Louis
St. Louis	M. Roman Banton, St. Louis
St. Louis	William C. Banton, II, St. Louis
St. Louis	George M. Bohigian, St. Louis
St. Louis	Robert Bolton, St. Louis
St. Louis	Harold H. Bowerman, St. Louis
St. Louis	Pacelli Brion, St. Louis
St. Louis	Gerard Callaghan, St. Louis
St. Louis	Rudolph E. Catanzaro, St. Louis
St. Louis	Cyril Costello, St. Louis
St. Louis	Joseph A. Costrino, St. Louis
St. Louis	Robert Cuddihee, St. Louis
St. Louis	Richard J. Dames, St. Louis
St. Louis	Pablo C. deUngria, St. Louis
St. Louis	Henry C. Dugas, St. Louis
St. Louis	Virgilio Dumadag, St. Louis
St. Louis	James E. Edwards, St. Louis
St. Louis	Linda A. Fisher, St. Louis
St. Louis	George D. Flanigan, Jr., St. Louis
St. Louis	Mariano Floro, St. Louis
St. Louis	Paul L. Friedman, St. Louis
St. Louis	Elliot F. Gellman, St. Louis
St. Louis	Marijan Herjanic, St. Louis
St. Louis	J. Ted Jean, St. Louis
St. Louis	Jack Kayes, St. Louis
St. Louis	Edward H. Kowert, St. Louis
St. Louis	Francis X. Lieb, St. Louis
St. Louis	T. Cameron MacCaughelty, St. Louis
St. Louis	Otakar Machek, St. Louis
St. Louis	Maria E. Manion, St. Louis
St. Louis	Robert Marcus, St. Louis
St. Louis	Ravinder Mehra, St. Louis
St. Louis	Orlando Meneses, St. Louis
St. Louis	Melvin Meyer, St. Louis
St. Louis	Gerald Moritz, St. Louis
St. Louis	Gary Muncy, St. Louis
St. Louis	David L. Ohlms, St. Louis
St. Louis	Leopold P. Pardo, St. Louis
St. Louis	Lourdes Santos-Pardo, St. Louis
St. Louis	S. D. Parwatikar, St. Louis
St. Louis	Robert Rainey, St. Louis
St. Louis	David M. Reisler, St. Louis
St. Louis	Frank O. Richards, St. Louis
St. Louis	Hubert A. Ritter, St. Louis
St. Louis	John P. Roberts, St. Louis
St. Louis	Jo-Ellyn M. Ryall, St. Louis
St. Louis	Antonio B. Santillano, St. Louis
St. Louis	Melvin Schwartz, St. Louis
St. Louis	J. S. Sciortino, St. Louis
St. Louis	Edward J. Shaw, St. Louis
St. Louis	David L. Simon, St. Louis
St. Louis	Kenneth R. Smith, Jr., St. Louis
St. Louis	Bruce Stoliar, St. Louis
St. Louis	George Thoma, St. Louis
St. Louis	Donald L. Thurston, St. Louis
St. Louis	Ernest T. Velasco, St. Louis
St. Louis	Harvey Walker, Jr., St. Louis
St. Louis	Miles C. Whitener, St. Louis
St. Louis	James M. Whittico, St. Louis
St. Louis	James Wiant, St. Louis
St. Louis	David L. Wilkinson, St. Louis
St. Louis	Vallee L. Willman, St. Louis

Fourth District

Franklin-Gasconade-Warren	Sam Farrell, Washington
Franklin-Gasconade-Warren	George Workman, Hermann
St. Charles-Lincoln	Edward O. Damron, St. Charles
St. Charles-Lincoln	Ferdinand Del Pizzo, St. Charles

Fifth District

Audrain	Tom T. Critchlow, Mexico
Audrain	Gerald Hoxworth, Mexico
Audrain	Ben Jolly, Mexico
Boone	William C. Allen, Columbia
Boone	Thomas R. Anderson, Columbia
Boone	William D. Bradshaw, Columbia
Boone	Diane T. Brukardt, Columbia
Boone	Thomas W. Burns, Columbia
Boone	James C. Denninghoff, Columbia
Boone	Richard A. Heimburger, Columbia
Boone	James M. Pickens, Columbia
Boone	Kenneth Rall, Columbia
Boone	Gil Ross, Columbia
Boone	Garth Russell, Columbia
Boone	Hugh E. Stephenson, Columbia
Boone	Robert M. Thomas, Columbia
Callaway	Henry Durst, Fulton
Cole	Victoria Gunn, Jefferson City
Cole	Larry Stauffer, Jefferson City
Cole	Robert P. Wankum, Jefferson City
Cole	James J. Weiss, Jefferson City
Cooper	George W. Winn, Boonville
Lake of the Ozarks	Chris K. Fotopoulos, Osage Beach
Lake of the Ozarks	Otis O. Moseley, Osage Beach
Lake of the Ozarks	J. Loren Washburn, Versailles
Montgomery	Samuel J. Byland, Wellsville

Sixth District

Lafayette-Ray	George Davault, Richmond
Lafayette-Ray	Jerry Meyer, Concordia
Saline	K. Thomas Papreck, Marshall
West Central	Robert L. Magee, Eldorado Springs
West Central	Candice Moore, Nevada
West Central	M. Ted Moore, Nevada

Seventh District

Jackson	John Aldridge, Kansas City
Jackson	Jennifer D. Ashby, Kansas City
Jackson	Keith D. Ashcraft, Kansas City
Jackson	Steven H. Behrends, Kansas City
Jackson	R. Don Blim, Kansas City
Jackson	John S. Carlson, Kansas City
Jackson	Alfred A. Caruso, Kansas City
Jackson	Michael R. Caughron, Kansas City
Jackson	Donnalea S. Childs, Kansas City
Jackson	Robert W. Clothier, Kansas City
Jackson	Mary C. Colglazier, Kansas City
Jackson	Calvin J. Curts, Kansas City
Jackson	William E. Dorzab, Kansas City
Jackson	Lawrence L. Evans, Kansas City
Jackson	Robert C. Fairchild, Kansas City
Jackson	F. David Fortin, Kansas City
Jackson	Thomas F. Green, Kansas City
Jackson	Frederick W. Hahn, Jr., Kansas City
Jackson	R. R. Hannas, Kansas City
Jackson	John W. Hardy, Kansas City
Jackson	Thomas S. Helling, Kansas City
Jackson	David G. Hof, Kansas City
Jackson	James P. Hopkins, Kansas City
Jackson	Robert E. Hughes, Kansas City
Jackson	John D. Hunkeler, Kansas City
Jackson	Harry S. Jonas, Kansas City
Jackson	Samuel T. Jones, Kansas City
Jackson	Harold W. Keairnes, Kansas City

Jackson	R. Stacy Long, Kansas City
Jackson	William J. Medlicott, Kansas City
Jackson	R. B. Michelson, Kansas City
Jackson	Gerald L. Miller, Jr., Kansas City
Jackson	Nirmal K. Mitra, Kansas City
Jackson	Earl A. Munyan, Kansas City
Jackson	Milton B. Ozar, Kansas City
Jackson	George K. Parkins, II, Kansas City
Jackson	W. R. Peterson, Kansas City
Jackson	Robert A. Raich, Kansas City
Jackson	S. K. Reddy, Kansas City
Jackson	Dorothy D. Reister, Kansas City
Jackson	John H. Renner, Kansas City
Jackson	Donald C. Sanders, Kansas City
Jackson	William F. Sanders, Kansas City
Jackson	Robert G. Schwegler, Kansas City
Jackson	Robert A. Slickman, Kansas City
Jackson	Wilber B. Spalding, Kansas City
Jackson	Elias M. Throne, Kansas City
Jackson	Frank W. Titterington, III, Kansas City
Jackson	George X. Trimble, Kansas City
Jackson	Charles B. Wheeler, Jr., Kansas City
Jackson	David D. Zoller, Kansas City

Eighth District

Dallas-Hickory-Polk-Dade	Ben Koon, Bolivar
Greene	Apolinario A. Ancheta, Springfield
Greene	F. M. Corry, Springfield
Greene	Darrel Domann, Springfield
Greene	David W. Hall, Rogersville
Greene	Duane Hellam, Springfield
Greene	H. B. Ivy, Springfield
Greene	W. B. Johnson, II, Springfield
Greene	Richard Loeb, Springfield
Greene	Don Menchetti, Springfield
Greene	DeArmond Moore, Springfield
Greene	F. D. Muegge, Springfield
Greene	Stanley Peterson, Springfield
Greene	Dan Sullivan, Springfield
Greene	Ronald Wachter, Springfield
Greene	Gary K. Walker, Springfield
Greene	Norman R. Wall, Springfield
Greene	Courtney Whitlock, Springfield
Greene	James Wolfe, Springfield
Jasper	James Arnold, Joplin
Jasper	J. D. Frogge, Joplin
Jasper	Carl C. Pearman, Joplin
Jasper	Howard H. Roberts, Joplin
Jasper	Robert L. Willcoxon, Joplin
Ozarks	Paul B. Anderson, Neosho
Ozarks	Richard Betz, Neosho
Ozarks	Joseph L. Bizek, Aurora
Ozarks	Mary Newman, Cassville
Tri-Lakes	Roy Gillispie, Branson
Tri-Lakes	James Hoffin, Branson
Webster	Thomas M. Macdonnell, Marshfield

Ninth District

Mid-Missouri	Seth Paskon, Salem
South Central	Claude Cooper, Thayer
South Central	James Hasek, Mountain Grove
South Central	O. Martin Hasek, Mountain Grove
South Central	Bruce Preston, West Plains
South Central	Joe Wall, Houston

Tenth District

Butler-Wayne-Ripley-Carter	T. E. Ruff, Poplar Bluff
Butler-Wayne-Ripley-Carter	Kirby Turner, Poplar Bluff
Cape Girardeau	Jean A. Chapman, Cape Girardeau
Cape Girardeau	Gordon W. Eller, Cape Girardeau
Cape Girardeau	J. Marshall Jung, Cape Girardeau
Cape Girardeau	Melvin Kasten, Cape Girardeau
Cape Girardeau	C. P. McGinty, Cape Girardeau
Cape Girardeau	C. R. Talbert, Cape Girardeau
Jefferson	Benjamin I. Albano, Crystal City
Jefferson	Michael K. Blank, DeSoto
SEMO	Richard Comeau, Dexter
SEMO	Ed Masters, Sikeston
SEMO	John Sargent, Sikeston

Delegates-At-Large

Jay Meyer, St. Louis, Speaker
Barbara Buchanan, Kansas City, Vice-Speaker

Past-Presidents

Richard V. Bradley, St. Louis
Victor Buhler, Kansas City
Joseph L. Fisher, St. Joseph
Howard J. McAlhany, Springfield
Andrew McCanse, Kansas City
Doyle C. McCraw, Bolivar
H. E. Petersen, St. Joseph
Byron M. Stuart, Boonville

Student Delegates

Mr. David W. Brumley, St. Louis University School of Medicine
Mr. John DeSpain, University of Missouri-Columbia School of Medicine
Ms. Mika Kamada, University of Missouri-Kansas City School of Medicine
Mr. Arthur Kavanaugh, St. Louis University School of Medicine
Mr. G. Robert Kletzker, University of Missouri-Columbia School of Medicine
Mr. Tom Reardon, University of Missouri-Kansas City School of Medicine
Mr. Daniel Scodary, St. Louis University School of Medicine

Dr. Andrew McCanse, chairman of the Credentials Committee, reported that ten officers, 17 councilors and 160 delegates were present and constituted a quorum.

The minutes of the 123rd Annual Session in St. Louis were approved as reported in the July, 1981 issue of Missouri Medicine.

Reference Committees

The Speaker announced the appointment of the following reference committees:

CONSTITUTION AND BYLAWS

Dorothy D. Reister, Shawnee Mission, Kan., *Chairman*
Paul L. Friedman, St. Louis
Mr. Tom Reardon, University of Missouri-Kansas City
K. T. Papreck, Marshall
James C. Denninghoff, Columbia

REPORTS OF OFFICERS

Jack Kayes, St. Louis, *Chairman*
R. Don Blim, Kansas City
Bruce Preston, West Plains
Bruce Stoliar, Florissant
James J. Weiss, Jefferson City

RESOLUTIONS

Donald Fakhoury, Kansas City, *Chairman*
Carl C. Pearman, Joplin

Harry S. Jonas, Kansas City
Linda Fisher, St. Louis
J. Marshall Jung, Cape Girardeau

The Speaker introduced Eugene T. Hansbrough, M.D., president of the MSMA: John I. Matthews, M.D., president-elect of the MSMA; and Mrs. Jerry Meyer, president of the MSMA Auxiliary, respectively. Each addressed the House and their remarks are published in this issue, beginning on page 385.

Mrs. Meyer introduced Mrs. Sam Gaston, Joplin, president-elect of the MSMA Auxiliary; Mrs. Keith D. Jones, past-president of the MSMA Auxiliary and president of the Woman's Auxiliary to the Southern Medical Association; and Mrs. Torrence P. B. Payne, president-elect of the American Medical Association Auxiliary. Mrs. Jones and Mrs. Payne spoke briefly to the House.

The Speaker introduced Dr. Hubert A. Ritter of St. Louis, a member of the AMA Board of Trustees and past-president of the AMA Educational Research Fund. After remarks by Dr. Ritter about the AMA-ERF and the current special need for contributions, Mrs. Meyer, president of the MSMA Auxiliary, presented AMA-ERF checks to Missouri's four medical schools as follows: Washington University, $8,622.50; University of Missouri-Columbia, $5,166.66; St. Louis University, $17,907.70; and the University of Missouri-Kansas City, $4,550.33.

Dr. Ritter also expressed appreciation to the MSMA Auxiliary and the AMA Auxiliary for their outstanding efforts on behalf of the AMA-ERF.

As chairman of the MSMA Committee on Legislative Affairs, Dr. Matthews made a special presentation on behalf of the MSMA to Senator Paul L. Bradshaw of Springfield. The plaque reads as follows:

> "Appreciation award to Senator Paul L. Bradshaw for his dedication and ability to the Missouri General Assembly and his continuing efforts to improve medical care for the citizens of Missouri."

President Hansbrough announced the first recipient of the newly established Missouri State Medical Association's *Citizenship and Community Service Award*, which he presented to Durwood G. Hall, M.D. of Springfield.

Criteria for nomination for the award are as follows:

> "The recipient must have made an outstanding contribution to the community for citizenship and public service above and beyond the call of duty as a practicing physician."

Dr. Hall, the recipient of many awards in the fields of civic and medical organizational accomplishments, is a long-time member MSMA, AMA, a past-president of Greene County Medical Society and a former MSMA delegate to the AMA House of Delegates. Following his nomination as the Republican candidate for Congress in 1960, he was elected to six consecutive congressional terms. He chose not to seek reelection in 1972.

Dr. Hansbrough presented a special award of appreciation to Wilfred E. Wooldridge, M.D. of Springfield who has served as editor of Missouri Medicine since 1978. This plaque reads as follows:

> "In appreciation of outstanding services as editor and for extraordinary editorial contributions to Missouri Medicine, the official journal of the Missouri State Medical Association."

Dr. Hansbrough then introduced John Coury, M.D. of Port Huron, Mich., vice-chairman of the AMA Board of Trustees. Dr. Coury addressed the House.

Supplementary Council Report

The Speaker referred the delegates to the Supplementary Council report as represented by Dr. Irving H. Clark, chairman.

"The Missouri State Medical Association Council met at 3 pm on March 31, 1982, in the San Francisco Room of the Hyatt Regency Hotel, Kansas City.

"On motion, duly seconded, the minutes of the Council Meeting of February 6, 1982 were approved as distributed.

"Mr. Cooper informed the Council that we will have approximately 55 exhibits at this meeting. They are extremely important because they do provide about 20% of the total cost of the Annual Session and he urged those present to visit the exhibits and express their appreciation.

"Dr. Akhter, Missouri Division of Health, recently informed us that the matter of blood tests for barber's license applicants has been resolved. Applicants for barber's license will now be required only to obtain a signed statement from a physician that the applicant is free from contagious and infectious diseases.

"Dr. Stokes reported that they are currently having problems with PSRO regarding hospital length of stay and asked that this matter be referred to a commission for study. On motion, duly seconded, this was referred to the Commission on Medical Economics.

"The Council approved for the following two organizations for continuing medical education accreditation: Lake of the Ozarks Medical Society — Provisional one year and the Lung Association of Greater St. Louis — Provisional one year.

"Dr. Hansbrough appointed Dr. Jean A. Chapman of Cape Girardeau as a member of the Missouri Waste Control Coalition. Mr. Doug Viehland of the MSMA staff serves as this organization's present secretary-treasurer.

"The Division of Health has informed the MSMA that it is instituting a program in 20 counties in Missouri that will provide various services for follow-up of high-risk infants. Dr. Hansbrough will discuss this with Dr. Akhter.

"Dr. Hansbrough reported that the MSMA has nominated Dr. David Challoner for the AMA's Dr. William A. Beaumont Award.

"The Division of Health is currently adding numerous diseases to the list of reportable diseases. This matter is currently under consideration by the MSMA Executive Committee.

"The MSMA received a thank you letter from the MSMA Auxiliary expressing their appreciation for our assistance in the publication of *The Auxiligram*.

"Dr. Hansbrough reminded those present that it is his hope that by the end of this Session, all those present will be sustaining members of AMPAC.

"Mrs. Jerry Meyer, Auxiliary president, reported that the child restraint pamphlets have been printed and are currently being distributed throughout the state. She then thanked the Council for the kindnesses extended to her during her year as president-elect and president of the auxiliary.

"Dr. Hansbrough appointed the following Committee on Publication: Drs. Jordan Burkey, Springfield, chairman; Bruce Stoliar, St. Louis, vice-chairman; Don Menchetti, Springfield; Jerry Templer, Columbia; John Layle, Kansas City; and Earl Schultz, St. Louis.

"Dr. Bradley reminded the Council of the Auxiliary Auction that will be held on Thursday evening for the benefit of MSMF and AMA-ERF.

"Dr. Bradley gave a brief report on MOMEDICO and indicated that a more complete report will be given at the first session of the House of Delegates.

"Dr. Matthews gave a brief legislative report, indicating that physicians can expect increasing encroachment in the practice of medicine in the coming years. A more detailed legislative report is available at this opening session.

"Dr. Cooper asked for the Council approval of the following resolution:

> "'Be it resolved that the MSMA appoints a committee to meet with representatives of Medical Schools to discuss problems of mutual interest and to seek satisfactory resolutions of problems in areas of mutual concern.'

"On motion, duly seconded, the Council approved submission of the above resolution to this House of Delegates.

"Dr. Jordan Burkey recommended that the current Editorial Board for Missouri Medicine be reappointed. On motion, duly seconded, the Council reappointed the present Editorial Board.

"Dr. Bradley reported that the St. Louis Metropolitan Medical Society is initiating a private sector review program to replace the activities currently being conducted by CEMPROC.

"Dr. Wooldridge, editor of Missouri Medicine, thanked Ms. Jean Duensing and Mr. Royal O. Cooper for their valuable assistance during his tenure as editor. Dr. Wooldridge expressed great satisfaction with the opportunity of being editor of Missouri Medicine and felt that his only failure was the inability to reach an accord with surrounding states for the publication of a combined regional medical journal.

"*Executive Session* — Royal O. Cooper was authorized to study and report back the feasibility of MSMI or the Association maintaining market in MOMEDICO stock."

Nominating Committee

President Hansbrough appointed the following members to the Committee on Nominations: Berwyn Moen, *First District;* Clarence Cohrs, *Second District;* Paul Freeman, *Third District;* Paul Rother, *Fourth District;* James Denninghoff, *Fifth District;* Jerry Meyer, *Sixth District;* Donald Youmans, *Seventh District;* Robert Willcoxon, *Eighth District;* Martin Hasek, *Ninth District;* Melvin Kasten, *Tenth District;* and Kim Harwood, *student component medical societies*.

At the request of the speaker, members of the House of Delegates stood for a moment of silence in memory of the Missouri State Medical Association members who died in the past year. The memoriam resolution and list of deceased members are published on page 416.

The speaker referred the delegates to the prefiled resolutions to be considered at the second session and reminded them that additional resolutions could be introduced for a two-thirds vote of acceptance for consideration by the House.

Resolutions introduced at this session and accepted for deliberation at the Second Session are the following:

Resolution #17 — Free Choice of Medical Care Systems

Resolution #18 — Need for Evaluation of Long-Term Health Policies

Resolution #19 — Better State Hospitals

Resolution #20 — Rehabilitation of Disabled Persons

Resolution #21 — Equal Service/Equal Fee

The speaker adjourned the first session of the House of Delegates.

SECOND SESSION

The Second Session of the House of Delegates was called to order at 4 PM on Friday, April 2 by Speaker Jay Meyer.

Dr. Andrew McCanse, chairman of the Credentials Committee, reported that ten officers, 17 councilors and 232 delegates were present and constituted a quorum.

On behalf of the Missouri State Medical Association, President-Elect John I. Matthews presented an award of appreciation to Rep. Everett W. Brown of Maryville. It reads as follows:

> "Appreciation award to Representative Everett W. Brown for his dedication and ability in the Missouri General Assembly and his continuing efforts to improve medical care to the citizens of Missouri."

Dr. Robert C. Fairchild announced that in celebration of its centennial year in 1981, the Jackson County Medical Society compiled a history of medicine and health in Jackson County over the past 100 years. The title is "From Shamans to Specialists." He presented copies of the book to Dr. Hansbrough, Dr. Matthews and Mr. Royal Cooper.

Dr. Richard Bradley presented a report on the organization of MOMEDICO and its progress since organization in 1973.

Dr. Hansbrough, vice-chairman, gave a report on MMPAC for Chairman John N. Martin who could not be present.

CONSTITUTION AND BYLAWS

Dr. Dorothy D. Reister of Shawnee Mission Kan., chairman, reported the following considerations of the Reference Committee on Constitutions and Bylaws.

Consent Calendar

1. Report of Committee on Constitution and Bylaws (Report #1)
2. Report of Committee on Constitution and Bylaws (Report #2)
3. Report of Committee on Legislative Affairs (Available 4-1-82)
4. Report of Commission on Medical-Legal Affairs

(The chairman reported that the Committee on Constitution and Bylaws Report #1 had been adopted by the House on April 1. Several amendments to the Committee's Report #2 were introduced to be voted on at the Third Session of the House. The Constitution and Bylaws as adopted at the final sessions are reported on Page 413.)

The Report of the Committee on Legislative Affairs was adopted by the House as recommended by the Reference Committee.

Dr. Reister commended the Report of the Committee on Legislative affairs that also was adopted.)

House actions on the following resolutions are reported in the section on "Resolutions" on pages 413-415.

Resolution # 9 — Code of Medical Ethics

Resolution #15 — FMG Representation on the MSMA Council

Resolution #18 — Need for Evaluation of Long-Term Health Policies

Resolution #20 — Rehabilitation of Disabled Persons

At this time, the speaker turned the gavel over to Dr. Barbara Buchanan, vice-speaker.

REPORTS OF OFFICERS

Dr. Jack Kayes, of St. Louis, chairman, reported the following considerations of the Reference Committee on Reports of Officers.

Consent Calendar

1. Report of the President
2. Remarks of the President-Elect
3. Report of the MSMA Auxiliary President
4. Report of the Secretary
5. Report of the Treasurer — MSMA Financial Statement
6. Report of the Executive Secretary
7. Report of the Missouri State Medical Foundation — MSMF Financial Statement
8. Report of the Committee on Planning
9. Report of the Commission on Public Affairs
10. Report of the Committee on Publication
11. Council minutes of April 12, 1981; June 20, 1981; September 16, 1981; December 12, 1981; February 6, 1982; and March 31, 1982.

(There being no objections, the above items were considered as adopted with the understanding that approval also included the following resolution introduced by Dr. Cooper as part of the Supplemental Report of the Council dated March 31, 1982:

Be it resolved, that the MSMA appoints a committee to meet with representatives of medical schools to discuss problems of mutual interest and to seek satisfactory resolution of problems in areas of mutual concern.

House action on the following resolutions are reported in the section on "Resolutions" on pages 413-415.

Resolution # 3 — Cancer Reporting by Missouri Hospitals
Resolution # 4 — Medicine/Business Coalition
Resolution # 5 — Retention of Missouri Health Data Corporation Data
Resolution #13 — Dues Increase in 1983
Resolution #14 — Immunization of Preschool Children
Resolution #16 — Drugs of Abuse

Dr. Meyer assumed the gavel at this time.

RESOLUTIONS

Dr. Donald Fakhoury of Kansas City, chairman, reported the following considerations of the Reference Committee on Resolutions:

1. Report of the Committee on the Impaired Physician
2. Report of the Commission on Continuing Education and Health Manpower
3. Report of the Commission on Interspecialty Medicine
4. Report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations.

(There being no objections, the above items were considered as adopted.)

House actions on the following resolutions are reported in the section on "Resolutions" on pages 413-415.

Resolution # 1 — Method of Determining Payment of Hospital Bills by Third Parties
Resolution # 2 — MSMA Study of HMOs, IPAs and Hospital Satellite Clinics
Resolution # 6 — UCR Terminology (A-81)
Resolution # 7 — Model Program Using Tax Credits or Deductions to Physicians for Care of Indigent Patients
Resolution # 8 — Tax Credits or Deductions to Physicians for Care of Indigent Patients
Resolution #10 — Reimbursement for Care Provided in Physician's Office

Dr. Stokes and Dr. German to Head MSMA Council

Dr. James M. Stokes, St. Louis, was elected chairman of the Council for 1982-1983 at the Council meeting that followed the MSMA House of Delegates session on April 4. Dr. Walter A. German, Springfield, was elected vice-chairman.

The Council also reelected Dr. B. A. Moranville, Columbia, as secretary of the MSMA and reelected Dr. Carol F. Williams, St. Louis, as treasurer.

Resolution #11 — Federal Loan Programs for Medical Students
Resolution #12 — Civil Defense Funding
Resolution #17 — Free Choice of Medical Care Systems
Resolution #19 — Better State Hospitals
Resolution #21 — Equal Service/Equal Fee

At this time, President Hansbrough made a special presentation to Dr. Max Heeb of Sikeston for the Missouri Department of Social Services, Division of Family Services. Dated March 11, 1982, it was signed by Governor Christopher Bond and Secretary of State James Kirkpatrick and reads as follows:

"From the State of Missouri, Department of Social Services, Division of Family Services. A certificate of commendation awarded Max A. Heeb in recognition and appreciation of outstanding service to the State of Missouri as a member and chairman of the Medical Advisory Committee."

The meeting was recessed until the third Sunday session on Sunday, April 4.

THIRD SESSION

The third session of the MSMA House of Delegates was called to order by Speaker Jay Meyer at 7:30 AM on Sunday, April 4.

Dr. McCanse, chairman of the Credentials Committee, reported that ten officers, 17 councilors and 246 delegates were present and constituted a quorum.

NOMINATIONS COMMITTEE

Dr. Melvin Kasten of Cape Girardeau, chairman of the Committee on Nominations, submitted the names of the following members on the slate of officers for the ensuing year.

Vice-President — Dr. Byron E. Watts, Jefferson City
Vice-President — Dr. Vernon Balster, St. Louis
Vice-President — Dr. O. A. Griffin, Buffalo
Speaker — Dr. Jay Meyer, St. Louis
Vice-Speaker — Dr. Barbara Buchanan, Kansas City
AMA Delegate — Dr. Hugh E. Stephenson, Jr., Columbia
AMA Delegate — Dr. Francis X. Lieb, St. Louis
AMA Delegate — Dr. George M. Bohigian, St. Louis
AMA Alternate Delegate — Dr. Richard V. Bradley, St. Louis
AMA Alternate Delegate — Dr. Richard P. Bowles, Liberty

AMA Alternate Delegate — Dr. Andrew McCanse, Kansas City

(There were no nominations from the floor. The above slate of officers were elected by acclamation.)

Dr. Ben Moranville, secretary, announced that the following councilors and vice-councilors had been elected:

First District — Dr. Richard C. Hedges, North Kansas City
Vice-Councilor — Dr. Gary A. Dyer, St. Joseph
Third District — Dr. J. Otto Lottes, St. Louis
Dr. Theodore L. Paletta, St. Louis
Dr. Frederick D. Peterson, St. Louis
Vice-Councilor — Dr. Gerard Callaghan, St. Louis
Fifth District — Dr. H. Peter Ekern, Mexico
Dr. Alan L. Braun, Jefferson City
Vice-Councilor — Dr. Kenneth Rall, Columbia
Seventh District — Dr. I. H. Clark, Kansas City
Dr. Ronald A. Youmans, Kansas City
Dr. Milton B. Ozar, Kansas City
Vice-Councilor — Dr. James P. Hopkins, Kansas City
Eighth District — Dr. Marvin A. Singleton, Joplin
Vice-Councilor — Dr. Frank M. Corry, Mountain Grove
Ninth District — Dr. Jack Wiles, West Plains
Vice-Councilor — Dr. O. Martin Hasek, Mountain Grove
Student Councilor — Tim Harwood, Columbia
Student Vice-Councilor — Tom Reardon, Kansas City

At this time, Speaker Meyer turned the gavel over to Dr. Barbara Buchanan, vice-speaker.

Installation of Officers

The speaker invited the officers, councilors and vice-councilors to stand in front of the podium where Dr. B. A. Moranville, secretary, administered the oath of office.

Dr. Irving H. Clark, newly-elected president-elect, was escorted to the speaker's stand where he made a brief acceptance speech. Mrs. Clark also was escorted to the stand and was introduced to the House of Delegates.

The speaker invited President John I. Matthews to announce his committee and commission appointments for the 1982-1983 year. Members whose terms had not expired were not mentioned and it is assumed that they will continue to serve.

Committee Appointments

Committee on Constitution and Bylaws — John D. Hunkeler, Kansas City and Jo-Ellyn Ryall, St. Louis (terms to expire in 1985; Kirby L. Turner, Poplar Bluff, *chairman* for 1982-1983.

Committee on Planning — David Glover, Warrensburg, and Carl Kruse, Palmyra (terms to expire in 1987); Melvin C. Kaston, Cape Girardeau, *chairman* for 1982-1983.

Committee on Voluntary Health Agencies — William Banton, St. Louis; and David Marty, Jefferson City (terms to expire in 1984); Robert L. Carolla, Springfield, and Marvin Alberg, Kansas City (terms to expire in 1985). Robert L. Carolla, Springfield, *chairman* for 1982-1983.

Committee on Legislative Affairs — Irving H. Clark, Kansas City; James M. Stokes, St. Louis; Walter A. German, Springfield; John Lyskowski, Alan L. Braun and John I. Matthews, Jefferson City; Mrs. Sam Gastan, Joplin, president of the MSMA Auxiliary, *ex officio*. John I. Matthews, *chairman* for 1982-1983. (one-year terms).

Committee on the Impaired Physician — William I. Stryker, St. Louis (term to expire in 1985); and David L. Ohlms, St. Louis, *chairman* for 1982-1983.

Liaison Committee With the Board of Healing Arts — Thomas J. Cooper, St. Louis; Donald McIntosh, Kansas City; John N. Martin, St. Joseph; Howard J. McAlhany, Springfield; E. T. Hansbrough, Poplar Bluff (terms to expire in 1983); John I. Matthews, Jefferson City, *ex officio*. Donald McIntosh, Kansas City *chairman* for 1982-1982.

Commission Appointments

Commission on Public Affairs — Victoria Gunn, Jefferson City (term to expire in 1984); Carl Myers, Platte City; Hugh Bartlett, Rolla; Bruce Stoliar, St. Louis; George Bohigian, St. Louis; Dorothy Reister, Kansas City (terms to expire in 1985); and Elias Throne, Kansas City, *chairman* for 1982-1983.

Commission on Medical Economics, Third Party Medicine and Governmental Relations — Gerard Callaghan, St. Louis; Linda Fisher, St. Louis; Joseph Kahn, Sikeston; Felix D. Fortin, Kansas City; M. H. Choudhury, Mansfield (terms to expire in 1985); and Fred W. Hahn, Kansas City, *chairman* for 1982-1983.

Commission on Continuing Education and Health Manpower — James J. Morgan, Kansas City; William D. Bradshaw, Columbia; Robert H. Ramsey, St. Louis; J. Michael Conoyer, St. Peters; H. Jayanandaiah, Hannibal (terms to expire in 1985). William D. Bradshaw, Columbia, *chairman* for 1982-1983.

Commission on Medical-Legal Affairs — Philip R. Fogle, Springfield; William Medlicott, Kansas City; David M. Reisler, St. Louis; Bernard Draper, Rolla; Adelia Doerhoff, Jefferson City (terms to expire in 1985); Ben I. Albano, Crystal City (term to expire in 1983); Garth Russell, Columbia, *chairman* for 1982-1983.

Commission on Interspecialty Medicine — It is the policy for the president of the Association to appoint representatives of the specialty organizations making up the Commission on Interspecialty Medicine as recommended by those specific organizations. Some of these organizations had not provided names of their proposed representatives by this date. Following are appointments of representatives who have been recommended as of April 4:

Missouri State Allergy Association — Arnold Dankner, St. Louis; *American College of Emergency Physicians* — R. R. Hannas, Kansas City; *Missouri Ear, Nose & Throat Association* — Kenneth A. Buchwach, Kansas City; *Missouri Society of Internal Medicine* — Charles Jobe, Springfield; *Missouri Ophthalmological Society, Inc.* — Nicholas J. Colosi, St. Louis; *Missouri State Orthopaedic Society* — Michael S. Clarke, Springfield; *Missouri Chapter, American Academy of Pediatrics* — Donald L. Thurston, St. Louis; *Physical Medicine and Rehabilitation* — Otakar Machek, St. Louis; *Missouri Psychiatric Association* — Thomas K. Mangelsdorf, St. Louis; *Missouri Radiological Society* — Anthony A. Berni, St. Louis; *American College of Surgeons, Missouri Chapter* — Horace Thomas, Columbia; *Missouri State Surgical Society* — Cyril Costello, St. Louis; *Missouri Thoracic Society* — John Goheen, Kansas City; *Federation of Missouri Urologists* — Mark J. Brodkey, Kansas City; *Missouri Society of Anesthesiology* — Paul Friedman, St. Louis; *Missouri Society of Pathologists* — T. J. Cooper, St. Louis.

It was voted to hold the 125th Annual Convention of the MSMA on March 16-20, 1983, at Tan-Tar-A Resort at the Lake of the Ozarks.

It was voted to hold the 126th Annual Convention in St. Louis in 1984 and to hold the 127th Annual Convention in Kansas City in 1985.

The speaker adjourned the 124th Annual Convention of the MSMA House of Delegates.

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CONTRAINDICATIONS: Not for use in the eyes or in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

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Report of Committees and Commissions

REPORT OF THE COMMITTEE ON CONSTITUTION AND BYLAWS

(REPORT NO. 1)

At the 1981 Annual Session, the House of Delegates of the Missouri State Medical Association voted to discontinue the Interim Session of the House. In so voting, one change in the MSMA Constitution was overlooked. This oversight was presented by the Committee on Constitution and Bylaws at the Annual Session for final vote at the 1982 Annual Session. (Bracketed words are deleted.)

> *Article XI. Amendments*. The House of Delegates may amend any article of the constitution by a two-thirds vote of the delegates present and voting in any Annual [or Interim] Session, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

Robert R. MacDonald, Jr., *Chairman*
R. Stacy Long
Miles C. Whitener
Roy Gillispie
Kirby L. Turner

REPORT OF THE COMMITTEE ON CONSTITUTION AND BYLAWS

(REPORT NO. 2)

In accordance with Article VII of the Constitution of the Missouri State Medical Association, the Committee on Constitution and Bylaws submits the following changes for consideration by the MSMA House of Delegates at the April, 1982 Annual Session.

In reviewing the Constitution and Bylaws, the Committee became aware of a confusing situation whereby the word "session" is used to denote both the Association's annual meeting and the meetings of the House during the annual meeting. This has led to some problems, according to the Speaker of the House, so the Committee proposes that the annual meeting of the Association be termed the "Annual Convention" and that the gatherings of the House of Delegates during the Annual Convention be termed "sessions." Most of the changes listed below concern this differentiation.

Other changes proposed by the Committee include a rewording of Bylaws Chapter III, Section 1 (a) to clarify requirement for introduction of resolutions; a renumbering of various sections in Bylaws Chapters III and IV; deletion of some redundant language in Chapter II, Section 3; Chapter III, Section 1 (a) and Chapter V, Section 5 and a few minor editorial changes.

The changes in Article VI and Article XI of the Constitution are placed before the House in 1982 for final vote in 1983.

In reprinting the entire Constitution and Bylaws of the Association, new language is underlined while deleted language is bracketed.

COMMITTEE ON PLANNING

The Committee on Planning met October 24, 1981, at the MSMA Headquarters in Jefferson City.

The Committee heard the annual "President's-Elect Report" presented by John I. Matthews, M.D., and considered a lengthy agenda covering such topics as current Association services, current Association-related activities, Association membership, Association finances and ideas for future Association activities.

Following discussion, the Committee forwarded the following recommendations to the Council for consideration:

* Have Staff research the Tele/Research Program for possible participation.
* Asked the Council to restudy the Missouri State Medical Foundation with emphasis on the entire interest rate structure and the possibility of the Foundation becoming a revolving plan or be discontinued.
* Recommended that the Retired Lives Reserve Program be studied as a possible membership benefit.
* Requested the Association to develop better methods of explaining services available to specialty societies from MSMA Headquarters.
* Advised the MSMA Placement Service to inform inquiring physicians on where physicians are needed in the state.
* Suggested that local societies investigate the possibility of having hospitals pay society dues for emergency room physicians in hope of gaining better dialogue with these physicians.
* Requested a study on the feasibility of dividing the House of Delegates' Meeting from continuing medical education meetings.
* Recommended that Staff and Council pursue projects to increase non-dues income.
* Asked the Budget Committee to review the need for a dues increase which could be implemented in January, 1983.
* Recommended that a "Long-Range Planning Seminar" be held. The seminar, staffed by planning experts, would include the Council, Planning Committee and Staff.

Since the Council later approved the "Long-Range Planning Seminar," your Committee expects to meet in conjunction with that seminar.

Melvin C. Kasten, *Chairman*
Dan T. Sullivan
Joe L. Spears
George M. Bohigian
Fred D. Fowler
Gerald Hoxworth
Sammy L. Farrell
Joseph R. Prokop
William W. Haynie
J. Will Fleming

REPORT OF THE COMMITTEE ON THE IMPAIRED PHYSICIAN

The Committee on the Impaired Physician met on January 30, 1982 in addition to participating in numerous phone conferences throughout the year between commitee members and the MSMA staff. Once again, the Committee is pleased to announce that several physicians continue to successfully recover from drug- and alcohol-related impairments.

Despite these few successes, your Committee at the January 30 meeting expressed deep concern over the following issues:

1. Despite numerous contacts to the "Hotline," only five new cases of physician impairment were reported that led to intervention by the Committee. At this time, all of these physicians are actively involved in a program of rehabilitation. Considering that the number of physician suicides in our state this past year exceed the number of our referrals and in comparing the resports from other state medical societies with their activity level, the Committee is deeply concerned over a perceived apathy within our society concerning the impaired physician.
2. Despite diligently seeking qualified individuals to serve as confronters, all districts in the state are extremely short of volunteers.
3. Because of the shortage of manpower, the Committee is extremely concerned about the quantity and quality of follow-up services being offered to physicians and their families who have called upon the Committee for assistance.

During the January 30, 1982 meeting, the Committee unanimously went on record to examine the feasibility of a full-time Medical Director for the Impaired Physician Program of the MSMA. It was strongly felt by the members of the Committee that this may well be the only way to reach out and help our troubled and suffering colleagues, their families and patients. The concept of a full-time Medical Director has already been adopted by numerous state medical societies with great success.

A new method for centralizing the records of cases involving the Committee was also developed at the January 30, 1982 meeting to ensure a continued high level of confidentiality.

The Committee wishes to thank the MSMA membership and councilors for continuing to support this vitally important program. As unpleasant and discomforting as the topic of physician impairment is, the Committee feels it is our obligation to help our colleagues, their families, our patients and, in the long run, ourselves.

David L. Ohlms, *Chairman*
Arnold S. Block
Henry V. Guhleman
John J. O'Hearne
Philip J. LeFevre

REPORT OF THE COMMITTEE ON LEGISLATIVE AFFAIRS

To risk sounding like a broken record, your Committee on Legislative Affairs remains deeply concerned with the apparent apathy Missouri physicians have regarding important legislative issues. It would appear that we are so busy practicing medicine that we have little or no time to devote to the future of our profession and do not realize the long-term effects legislation can have on our patients.

We are allowing non-physicians to assume leading roles in determining who shall furnish health care and how that care shall be defined. Like it or not, the laws passed by the Missouri General Assembly, not educational or training qualifications, determine the scope of practice of limited license practitioners. The success of such practitioners in expanding their scope of practice is well documented by recent efforts of the optometrists and chiropractors.

Why are these practitioners gaining the ear of the General Assembly? Grass-roots involvement! Political action committee reports indicate that these practitioners are contributing $300 or more annually to their PACs. Not only are these funds used to support candidates for public office; the practitioners themselves become actively involved in election campaigns. Then, when the General Assembly is in session, these campaign contributors and supporters visit their lawmakers and deliver their message personally.

Physicians, on the other hand, become upset only after a detrimental bill has been passed or is facing imminent passage! In talking with the state senators and representatives, it would appear that perhaps 40 to 50 medical doctors conscientiously tell medicine's story to their elected officials. That is 40 to 50 out of MSMA's more than 6,100 members! It must be emphasized that the influence of those few active physicians does prevent the passage of many deleterious bills, but if more members were concerned, our track record would be far better.

A brief look at the current session, which ends on April 30, shows that one bill of interest to medicine has already been passed while seven others may be enacted.

A bill to revitalize the Ellis Fischel Cancer Hospital has passed both houses and is on the Governor's desk. The MSMA supported this bill.

Bills which could still be passed include:

SB 520, which redefines the practice of chiropractic in Missouri. Passed by the Senate, the bill awaits final House action. A redefinition of chiropractic bill passed last year and was vetoed by the Governor. However, the veto message stated that a compromise should be worked out to update the 1927 chiropractic statute. The present bill is that compromise.

SB481, which increased the threshold on Certificate-of-Need from the present $150,000 to $600,000 for capital expenditures and $400,000 for medical equipment or services. MSMA supports.

SB 522, which would make it illegal to manufacture or sell simulated controlled substances ("kiddie dope"). MSMA supports.

SB785, which would eliminate statutes which prohibit solemnizing the marriage of an epileptic. MSMA supports.

HB 976, which would allow the use of marijuana by approved patients with glaucoma or undergoing chemotherapy treatment.

HB 1086, which sets strict enforcement standards regarding fraud and abuse in the Medicaid program. MSMA has secured amendments which delete sections that would have been detrimental to private practitioners.

HB 1223, which would establish brain death as one method of determining when death occurs. MSMA supports.

Bills supported by the MSMA which are apparently too far down on the calendar to be reached this session include ones requiring child auto restraints, establishing a separate Department of Health and a bill requiring the losing party in a medical malpractice suit to pay the attorney fees of the prevailing party.

The MSMA has successfully derailed legislation designed to license additional health care personnel this Session. Those pushing for licensure were occupational therapists, radiological technologists, physician assistants and physical therapy assistants. The MSMA position is that such licensure is unnecessary, creates shortages of personnel and results in higher health care costs.

Your Committee on Legislative Affairs continues to search for ways to convince MSMA members of the importance of becoming active in political affairs. We again express our appreciation to Dr. Walter German and his "Key Contact" Committee for the assistance they have rendered.

But members of this House of Delegates should be fully aware that although physicians outnumber limited practitioners in Missouri by a wide margin, "they" are working while "we" are not! And until physicians decide that they have taken all that they are going to take, we will continue to lose a little ground each year.

John I. Matthews, *Chairman*
Eugene T. Hansbrough
Irving H. Clark
James M. Stokes
Carol F. Williams
Walter A. German
T. J. Cooper
Larry Piepergerdes

REPORT OF THE COMMITTEE ON PUBLICATION

The 78th volume of Missouri Medicine was completed with the publication of the December, 1981 issue. During the year, 13 issues were printed and distributed. Ten of these issues contained scientific articles, special articles and features, organizational reports, monthly messages from the presidents of the MSMA and the MSMA Auxiliary and news and items of interest to members of the medical profession.

The February issue reported the transactions of the Fifth Annual Interim Session and the July issue presented a summary of the meetings and actions taken by the House of Delegates at the 123rd MSMA Annual Session.

There were two special issues of the Journal. The scientific articles in the June issue were contributed by members of the faculty of the University of Missouri-Columbia School of Medicine and the scientific articles in the December issue were from members of the staff of Ellis Fischel State Cancer Hospital and Cancer Research Center.

During the year, 39 scientific articles, four special review articles and four special features were published. Most of the articles were written by Missouri authors.

The Association was saddened by the death on July 2, 1981 of Leo H. Pollock, M.D. who had served Missouri Medicine for 27 years as contributing editor and author of the column, "Missouri Medicine in Review."

The editors wish to express appreciation to all who submitted scientific manuscripts and to all other individuals, institutions and organizations for their valuable contributions. This especially includes the administrations, faculties and publications departments of the University of Missouri in Columbia and Kansas City, St. Louis University, Washington University and the Ellis Fischel State Cancer Hospital and Cancer Research Center.

The complete financial report for the Journal is included in the financial statement of the Missouri State Medical Association for 1981. The report is published in the March, 1982 issue of Missouri Medicine and is included in the Delegates' Handbook. At year's end, journal circulation was 6,548.

Wilfred E. Wooldridge, *Chairman*
Ernest Lorenc
William M. Mixson
Charles S. Sherwin
Byron M. Stewart

REPORT OF THE COMMISSION ON PUBLIC AFFAIRS

The Commission maintained an active public relations program throughout 1981. One of the major projects this year was a Communications Training Seminar on November 7 in Columbia. Approximately 30 participants, made up of physicians, local society staff and auxiliary members, attended this Burroughs Wellcome, Co., workshop. The seminar was designed to encourage physician involvement in radio and television talk shows.

Another project the Commission undertook was the production and distribution of "You and Your Physician — Partners in Reducing Health Care Costs." This educational brochure was used to inform patients about how to contain medical expenses. In 1981, more than 26,000 copies were distributed.

For television, the Commission approved three, 30-second public service announcements. Early in 1982, the spots were produced and distributed to 21 television stations. They addressed the subjects of teenage smoking, health care cost containment and adult alcohol abuse.

In addition, 16 public service announcements were sent to 150 radio stations; "Medical Messages," a twice-monthly health news column, was sent to 300 newspapers; and "Your Health," the MSMA's patient-education newsletter, was sent to all MSMA members for their waiting rooms.

Jean A. Chapman, *Chairman*
Robert F. Tobin
Chris K. Fotopoulos
A. J. Campbell
Charles L. Jobe
Elias M. Throne
Marvin R. Barbour
Leslie F. Bond
Edward J. Miller
Ben A. Moranville
Byron E. Watts
George Bohigian
Lawrence W. O'Neal
Vernon H. Balster

REPORT OF THE COMMISSION ON INTERSPECIALTY MEDICINE

The Commission on Interspecialty Medicine met on August 15, 1981 to consider several items that were referred to the Commission, as well as several matters brought before the representatives from their respective specialties.

The mechanics of the MSMA Key Contact Program were reviewed. Each specialty society was urged to make suggestions on how this program may be more effective.

The guidelines for trauma centers, as proposed by the American College of Surgeons and revised for the State of Missouri, were also reviewed. Hospitals desiring to be designated as trauma centers were advised that they would receive letters of designation in the near future.

The Council approved the Commission's recommendation that the MSMA request the Director of the Missouri Division of Health to clearly identify a unit responsible for the coordination of tuberculosis activities in both the public and private sectors of Missouri medicine.

A proposal to develop a Learning Resource Center during the MSMA Annual Meeting was referred to the Annual Session Program Committee for further study. A room would be designated for the use of audiovisual equipment. Each specialty society would be asked to support this endeavor by supplying appropriate tapes for review.

Resolutions #11 and #19 were referred to this Commission by the MSMA Council. Resolution #11 requires the MSMA to establish a program that encourages all physicians in Missouri to share in the privileges and responsibilities of providing care to the poor. Resolution #19 mandates that the MSMA undertakes a study to determine the magnitude of the problem of health care delivery to the poor and a solution be developed. The Council approved the Commission's two recommendations: (1) That the MSMA compiles data on the amount of free medical care provided by physicians of the state and that this data be made public by the MSMA to the state legislature and the populace of the state, and (2) that the MSMA compiles data on percentage of physicians throughout the state who participate in the Medicaid Program in order to determine whether all Missouri citizens have reasonable access to medical care.

The Commission also considered Resolution #36, "Hospital Staffed Satellite Clinics," that requires the MSMA to go on record in opposition to hospitals utilizing satellite clinics in outlying communities for the purpose of increasing the hospitals census. A Clay County Medical Association resolution calls for the MSMA to oppose the expansion of hospital activities beyond the traditional hospital role and into services already being adequately provided by the medical profession. These resolutions were discussed together as a package since they dealt with the same issue. The Commission's recommendation was that the MSMA supports the concept of both resolutions and that it further recommended that the MSMA takes official position in opposition to expansion of hospital activities beyond the traditional hospital role and into services that already are being adequately provided by the medical profession. However, the MSMA Council expressed concern pertaining to the phraseology of "beyond the traditional hospital role," since it would be difficult to define the traditional hospital role. The Council recommended that the MSMA supports the concept of both resolutions and that it is further recommended that the MSMA takes official position in opposition to expansion of hospital activities into services that already are being adequately provided by the medical profession.

The revisions of the 1981 "Accreditation Manual for Hospitals" affecting oral surgeons were reviewed. These revisions allow oral surgeons who meet certain criteria to perform a complete admission history, physical examination and to assess the medical risks of a procedure to a patient. The changes will become effective on January 1, 1982. The Commission recommended that the MSMA opposes in concept the JCAH proposed revisions allowing oral surgeons to independently perform an admission history and physical examination and to assess medical risks. However, those individuals who have successfully completed appropriate accredited training programs and who demonstrate specified skills should be allowed to perform these functions. After considerable discussion, the Council resolved that the MSMA opposes in concept the JCAH proposed revisions allowing oral surgeons to independently perform an admission history and physical examination and to assess medical risks.

Donald E. McIntosh, *Chairman*
Phillip E. Korenblat
F. Anthony Thomas
R. R. Hannas
Kenneth A. Buchwach
Thomas J. Hopkins
James S. White
R. William Burmeister
Harry Cole
James R. Wiant
Nicholas J. Colosi
Michael S. Clarke
William R. McPhee
Donald L. Thurston
Otakar Machek
Thomas Mangelsdorf
Anthony A. Berni
Charles B. Anderson
Cyril Costello
Gerald L. Miller, Jr.

REPORT OF THE COMMISSION ON CONTINUING EDUCATION AND HEALTH MANPOWER

A meeting of the Commission on Continuing Education and Health Manpower was held on June 13 and those present reviewed the critique sheets provided by the moderators and monitors assigned to the various scientific sessions during the MSMA 123rd Annual Session at the Chase-Park Plaza Hotel in St. Louis. The comments received indicated that the scientific sessions were generally well attended. There also was considerable discussion on how to stimulate physician attendance at the Annual Session.

The 124th Annual Session will be held on April 1-4, 1982 at the Hyatt Regency Hotel in Kansas City. Planning for this session will be initiated much earlier than in past years and each specialty society is being asked to formulate its program by September 1. It had been suggested that there be two general sessions. After consideration, it was recommended that the present format of one general session should be continued in light of the number of scientific sessions. Topics and speakers for the opening general session were discussed and the suggestions were given priorities and referred to the staff for implementation.

The Ad Hoc Committee commended the quality of programs sponsored by the specialty societies and voluntary health agencies during the 123rd Annual Session and also wished to express appreciation to the moderators and monitors for taking time from their schedules to assist the committee.

A request from the Southern Medical Association that the MSMA cosponsor the "Seminar on Medical Staff Leadership" on October 1 and 2 at the Lake of the Ozarks was referred to this Commission. It was felt that this request was received too late for proper dissemination.

A status report on accredited institutions and organizations in Missouri was provided for those present.

William D. Bradshaw, *Chairman*
George D. Comfort
Larry E. Benson
Ronald T. Hill
George X. Trimble
Raymond O. Frederick
Christopher H. Jung
Wilbur A. Mullarky
Walter C. Dandridge, Jr.
W. Wayne Boydston
H. Neal Grannemann
L. Arden Almquist
Manuel R. Comas
John C. Soucy
Charles A. Worley

REPORT OF COMMISSION ON MEDICAL-LEGAL AFFAIRS

The Co-joint Medical-Legal Committees of the Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons and the Missouri Bar met on January 9, 1982 in Columbia.

Legislative topics dominated the meeting with more than 16 pieces of legislation reviewed. All groups agreed to support legislation providing a determination of death and to oppose legislation providing a tax on professional services. Legislation that is deemed either not necessary and/or containing wording problems include access to patient records, authorizing execution of "living wills" and criminal proceedings concerning the mentally ill.

Professional liability legislation discussed included legislation requiring a nonprevailing party to pay attorney fees, discouragement of civil suits and interest on judgements. The MSMA and MAOPS generally support these concepts while the Bar has no position.

Other activities of the co-joint meeting included discussion of a Division of Insurance report containing statistics of closed malpractice claims, reaffirmation by the ABA and AMA of the current inter-professional code and two current disputes between physicians and attorneys that were referred to the respective associations for resolution. The Division of Insurance report commends Missouri for a significantly superior experience record but cautions that data are not entirely comparable and that awards have increased, just not as much as in the country as a whole.

Following adjournament of the co-joint meeting, MSMA members reviewed an update on the activities of MOMEDICO. The company continues to thrive. A rate adjustment was made for the coming year based upon accuarial projections of increased awards in the future.

Garth S. Russell, *Chairman*
Gil Manalo
Bernard Draper
Jay Meyer
David W. Hall
William J. Medlicott
John J. Krautmann
Charles B. Wheeler
Richard Bower
Robert H. Lund
Fred H. Thornton
Raymond Hartwig
George L. Hawkins, Jr.
Edward F. Bare

REPORT OF COMMISSION ON MEDICAL ECONOMICS, THIRD PARTY MEDICINE AND GOVERNMENTAL RELATIONS

The Commission met on August 1, 1981 in Columbia and by conference call on January 16, 1982. As in the past, Medicaid dominated the business before the Commission.

At each meeting, the expenditures and requested appropriations for Medicaid were discussed. Recommendations at each meeting called upon the Council and the MSMA members to make known the need for greater allocations to physician services. In January, the Commission urged support for increases in fees to provide economic incentives for physicians to provide services in their offices rather than in the hospital, especially the emergency room. In both meetings, a report on deferred compensation was received. While several physicians have made applications, they are in process and no physician has been approved as of January, 1982.

In other activities related to Medicaid, the Commission welcomed General American as the new Medicaid carrier replacing EDSF. The Commission discussed fiscal restraints implemented by the Department of Social Services and provided input to Commission members who also are members of the physician subcommittee advising the DOSS. Finally, the Commission was critical of statements by Governor Bond that implied there are large numbers of doctors earning a $100,000 income from treating Medicaid patients.

At the August meeting, the Commission discussed several resolutions adopted at the 1981 Annual House of Delegates dealing with health care for the poor. The Commission has recommended publishing a series of articles in Missouri Medicine emphasizing the need for all physicians to provide health care to the poor; that a questionnaire be developed to determine the extent to which physicians care for the poor without anticipation of reimbursement; and that a study be undertaken or located that addresses these issues, including mechanisms that will ensure greater participation by physicians. During the conference call, the Commission received a report indicating staff has not located, but is still searching, for said study; a questionnaire has been sent to all MSMA members and responses are still being received; and a report on tax credits for physicians who care for the poor is currently being reviewed by the AMA Board of Trustees. The Commission will receive further reports at future meetings.

Resolution #7 — UCR terminology was referred to the Commission and discussed during the January 16 conference call. It was recommended that a recent AMA report on this subject be endorsed and a resolution with the recommendations of this report be adopted at the 1982 MSMA House of Delegates in lieu of Resolution #7 (A-81).

As is a tradition, Medicare fee profiles were discussed at both meetings of the Commission. Other items of discussion included legislation providing for licensure of HMOs and another bill providing immunity for peer review organizations; a request by the Governor to identify state regulations that are burdensome and unnecessary; a report on the actions of the federal government to defund PSROs; and a review of the HCFA Claim Form 1500 used by CHAMPUS, Medicaid and Medicare.

Fred W. Hahn, *Chairman*
Philip A. Sherman
James L. Carpenter
Max A. Heeb
Mary K. McCaffree
Gerard M. Callaghan
Robert J. Stanley
Arturo C. Montes
Frederick L. Thompson
Charles H. Cozean
Edward J. Twin
Nicholas J. Colosi
Thomas H. Hendren
Howard H. Roberts
Stanley S. Peterson

REPORT OF THE MISSOURI STATE MEDICAL FOUNDATION

Since the inception of the Foundation in 1960, Missouri physicians have provided funds for 1,943 loans to 776 different medical students for a total of $1,391,110.

The volume of loan applications during 1981 amounted to 130 applications totalling $172,500 of which 63 were Spring loans and 67 were Fall loans. Due to the effect of inflation on medical education, the requests for financial aid will continue to outdistance funds available.

We would like to express sincere appreciation to Missouri physicians and to the MSMA Auxiliary for their continued support of the Foundation to provide financial assistance to men and women pursuing a medical career. During 1981, contributions from physicians and organizations to the Missouri State Medical Foundation totalled $9,411.

Max S. Franklin, M.D.
Miles C. Whitener, M.D.
Robert H. Tanner, M.D.
Mary E. S. Case, M.D.
Marvin A. Singleton, M.D.
Gary A. Dyer, M.D.
Albert D. Cross, M.D.
Larry P. Courter, M.D.
Frederick W. Hahn, M.D.
John P. Sargent, M.D.
Eugene T. Hansbrough, M.D.
Ms. Kim Webb

Changes in the MSMA Constitution and Bylaws

Acting upon recommendations from the Committee on Constitution and Bylaws, the House of Delegates adopted numerous minor changes in the Constitution and Bylaws. The majority of these changes were in response to confusion over the words "meeting" and "session." As adopted by the House, the annual meeting of the Association will be termed the "Annual Convention" while gatherings of the House of Delegates during the Annual Convention will be termed "Sessions."

Other minor changes pertained to renumbering of sections and deletion of redundant language.

One substantive change relates to the introduction of resolutions and is reprinted below. A copy of the complete MSMA Constitution and Bylaws is available upon request from Headquarters.

SUPPLEMENTAL REPORT OF THE REFERENCE COMMITTEE ON CONSTITUTION AND BYLAWS

Mr. Speaker, in response to the changes made by this House of Delegates on Friday in the report of the Committee on Constitution and Bylaws, Chapter III, Section 1, paragraphs 1 and 2, your Reference Committee submits the following language for final vote and recommends its adoption:

"Section 1. The House of Delegates shall meet annually at the time and place of the Annual Convention.

All resolutions received at the Association office no later than 45 days prior to the Opening Session of the Annual Convention will be accepted as business of the House of Delegates and will be published in the Delegates Handbook. Any additional resolutions to be introduced at the Opening Session must be made available to each member of the House of Delegates at least 24 hours before the Opening Session. These will be accepted as business of the House at the Opening Session and will be referred to an appropriate Reference Committee. Resolutions introduced at the Opening Session, but which did not meet the 24-hour deadline will be referred to a Reference Committee only if approved by two-thirds of the Delegates voting. Sufficient copies of the resolution, printed in standardized format, or funding for same, must be supplied by the individual or society introducing the resolution."

(See Resolution #13 on page 414)

Resolutions

Resolution #1 — Method of Determining Payment of Hospital Bills by Third Parties

(Introduced by Ozarks Medical Society)

Resolved, that the Missouri State Medical Association recommends that all hospitals be paid the same for the same services and that this payment be low enough to prevent wastage, duplication and to insure competitive management.

(Resolution #1 was not adopted.)

Resolution #2 — MSMA Study of HMOs, IPAs and Hospital Satellite Clinics

(Introduced by Cole County Medical Society)

Resolved, that the Missouri State Medical Association, through its Commission on Medical Economics, Third Party Medicine and Governmental Relations, monitors Health Maintenance Organizations, Individual Practice Associations, Preferred Provider Organizations and hospital satellite clinic practices in this State for the next five years, reporting annually to the Council on the extent of this type of activity and assess, as far as possible, the overall impact that it has on the medical profession in the State of Missouri.

(Resolution #2 was adopted.)

Resolution #3 — Cancer Reporting by Missouri Hospitals

(Introduced by Cole County Medical Society)

Resolved, that the Missouri State Medical Association supports efforts to make all malignant neoplasms with the exclusion of non-melanomatous cutaneous malignancies become reportable to the state by Missouri hospitals to provide the needed foundation of information to reduce the incidence of cancer, and be it further

Resolved, that this reporting mechanism be structured to insure patient confidentiality.

(Substitute Resolution #3 was adopted.)

Resolution #4 — Medicine/Business Coalition

(Introduced by the MSMA Council)

Resolved, that the Missouri State Medical Association works energetically toward the formation of a Missouri medicine/business coalition — its stated purpose to be the development at state and local levels of an effective dialogue on problems of mutual concern — especially those relating to the cost of care and the burdens of federal regulation, and be it further

Resolved, that an ad hoc committee be appointed by the President and charged with the responsibility of making the proposed coalition a reality.

(Resolution #4 was adopted.)

Resolution #5 — Retention of Missouri Health Data Corporation Data

(Introduced by the MSMA Council)

Resolved, that the Missouri State Medical Association asks the Board of Directors of MHDC to retain control of their data within Missouri and to notify the MSMA of the contingent plans they will use to carry this out.

(Resolution #5 was adopted.)

Resolution #6 — UCR Terminology (1981 Resolution #7)

(Introduced by the MSMA Council)

Resolved, that the MSMA and local medical societies bring to the attention of local insurance carriers instances of terminology in carrier communications which lead patients to believe physicians' charges are "unreasonable," and be it further

Resolved, that the present terminology is misleading to the patient and efforts to modify that terminology should be continued, and be it further

Resolved, that individual physicians consider the inclusion in their patient information materials an explanation as to why the amount billed may in some cases be more than the insurance benefit paid, and be it further

Resolved, that this resolution be adopted in lieu of Resolution #7 — UCR Terminology (as introduced at the 1981 House of Delegates).

(Substitute Resolution #6 was adopted as amended.)

Resolution #7 — Model Program Using Tax Credits or Deductions to Physicians For Care of Indigent Patients

(Introduced by Greene County Medical Society)

Resolved, that the MSMA, through its Commissions and Committees, and in cooperation with State and Federal Governments, explores various options, including some form of tax credits and/or charitable deductions, to provide physician incentives to care for indigent patients.

(Substitute Resolution #7 was adopted.)

Resolution #8 — Tax Credits or Deductions to Physicians for Care of Indigent Patients

(Introduced by Greene County Medical Society)

Resolved, that the Missouri State Medical Association and the American Medical Association work for changes in the state and/or federal tax laws and regulations that would allow physicians treating Medicaid and indigent patients to obtain tax credit rather than reimbursement from state or federal governments.

(Resolution #8 was not adopted.)

Resolution #9 — Code of Medical Ethics

(Introduced by Greene County Medical Society)

Resolved, that the MSMA House of Delegates directs the MSMA Council to study the development of a Code of Medical Ethics for the MSMA which concerns itself with the relationships between physicians and their patients.

(Resolution #9 was adopted as amended.)

Resolution #10 — Reimbursement for Care Provided in Physician's Office

(Introduced by the Commission on Medical Economics, Third Party Medicine and Governmental Relations)

Resolved, that the Missouri State Medical Association urges third party payers, including the Division of Family Services, to establish economic incentives for physicians to provide care in the office by paying for professional fees, appropriate laboratory and X-ray services, supplies and other ancillary services when performed in the physician's office.

(Substitute Resolution #10 was adopted.)

Resolution #11 — Federal Loan Programs for Medical Students

(Introduced by Mr. Arthur Kavanaugh, St. Louis University Student Medical Society)

Resolved, that the MSMA favors the continuation of federal and state subsidized, deferred repayment, low interest loan programs for medical students, along with proper enforcement of repayment of these loans.

(Substitute Resolution #11 was adopted.)

Resolution #12 — Civil Defense Funding

(Introduced by Mr. Arthur Kavanaugh, St. Louis University Student Medical Society)

Resolved, that the Missouri State Medical Association opposes legislation providing additional funds for civil defense.

(Resolution #12 was not adopted.)

Resolution #13 — Dues Increase in 1983

(Introduced by the MSMA Council)

Resolved, that dues for active members be increased by $10.00 per year effective January 1, 1983, and be it further

Resolved, that the MSMA Bylaws be changed to read as follows: (Changes are underlined)

"Section 1. (a). The annual dues of this Association shall be *$125* which shall be applicable to each active member of the Association beginning in *1983* and shall be levied per capita on the active members of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of *$62.50* for the first calendar year. . . ."

(Resolution #13 was adopted.)

Resolution #14 — Immunization of Preschool Children)

(Introduced by Cole County Medical Society)

Resolved, that the Missouri State Medical Association supports the concept of a statewide immunization education awareness campaign supported by private and public health care providers, and be it further

Resolved, that the Missouri State Medical Association supports the enactment of legislation which would establish strong immunization requirements for children attending licensed day care and preschool centers.

(Resolution #14 was adopted.)

Resolution #15 — FMG Representation on the MSMA Council

(Introduced by Leopoldo P. Pardo, M.D.,
Missouri International Physicians)

Resolved, that the MSMA House of Delegates encourages the Council and select committees to consult with representative Foreign Medical Graduate groups when discussing issues of particular interest to these groups, and be it further

Resolved, that all physicians, Foreign Medical Graduates included, should be encouraged to participate in their component medical societies, the MSMA and the AMA.

(Substitute Resolution #15 was adopted.)

Resolution #16 — Drugs of Abuse

(Introduced by St. Louis Metropolitan Medical Society)

Resolved, that the MSMA endorses the programs of agencies that have shown exemplary efforts to inform the public of the health hazards of drug abuses and are directed at correcting these abuses, and be it further

Resolved, that the MSMA works to implement such programs directed principally at the junior high school level in an attempt to prevent such abuses and their inevitable consequences.

(Resolution #16 was adopted.)

Resolution #17 — Free Choice of Medical Care Systems

(Introduced by St. Louis Metropolitan Medical Society)

Resolved, that the Missouri State Medical Association supports the freedom of all individuals to select his preferred system of medical care including the right to free choice of physicians; and be it further

Resolved, that this resolution be forwarded to the Department of Social Services noting that the MSMA opposes any and all policies of the Department that would not preserve this right of consumer choice.

(Resolution #17 was adopted.)

Resolution #18 — Need for Evaluation of Long-Term Health Policies

(Introduced by St. Louis Metropolitan Medical Society)

Resolved, that the MSMA feels the time is right to work on the evolution of national health policies; and be it further

Resolved, that the MSMA supports the AMA Board of Trustees' statement adopted 26 February 1982, as follows:

"The Association reiterates its belief that one of the most important goals for the country is the restoration of a sound fiscal policy leading to lasting economic recovery.

"The Association also states there is a need for an evaluation of long term health policies that will provide proper care for our citizens within the available national resources.

"The Association is undertaking such an evaluation and will make recommendations concerning health care, both long and short term, to help accomplish the necessary and desirable objective of restoring a sound fiscal condition for our country."

(Resolution #18 was adopted.)

Resolution #19 — Better State Hospitals

(Introduced by Edward H. Kowert, M.D., James E. Edwards, M.D., and Paul A. Dewald, M.D., St. Louis)

Resolved, that the MSMA, through its Council and Committees, studies and formulates suggestions in conjunction with the Division of Health as to the appropriate use of state hospitals.

(Substitute Resolution #19 was adopted.)

Resolution #20 — Rehabilitation of Disabled Persons

(Introduced by Boone County Medical Society)

Resolved, that the Missouri State Medical Association seeks positive ways to encourage training and rehabilitation for disabled persons, and be it further

Resolved, that the Missouri State Medical Association explores ways to work with and through existing organizations to remove barriers, both physical in regard to buildings, sidewalks, street curbs, and steps, and emotional barriers such as discrimination in employment, in finding housing and other vocational and social activities.

(Resolution #20 was adopted as amended.)

Resolution #21 — Equal Service/Equal Pay

(Introduced by Jasper County Medical Society)

Resolved, that the MSMA supports equal reimbursement for equal professional services provided by a physician, regardless of geographic location in the State of Missouri.

(Substitute Resolution #21 was adopted.)

Fifth Benefit Auction to Be Held in 1983!

The MSMA Auxiliary is proud to announce that plans are in progress for the Fifth Annual MSMF/AMA-ERF Benefit Auction to be held in 1983 at the Lake of the Ozarks. All members are urged to begin thinking about their donations to the auction that is sponsored by the MSMA and MSMAA.

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Suite 202A, 6600 West 95th Street, Overland Park, Kansas 66212
(913) 381-4222

In Memoriam

Whereas, there have been 79 deaths among members since the 1981 Annual Session, and

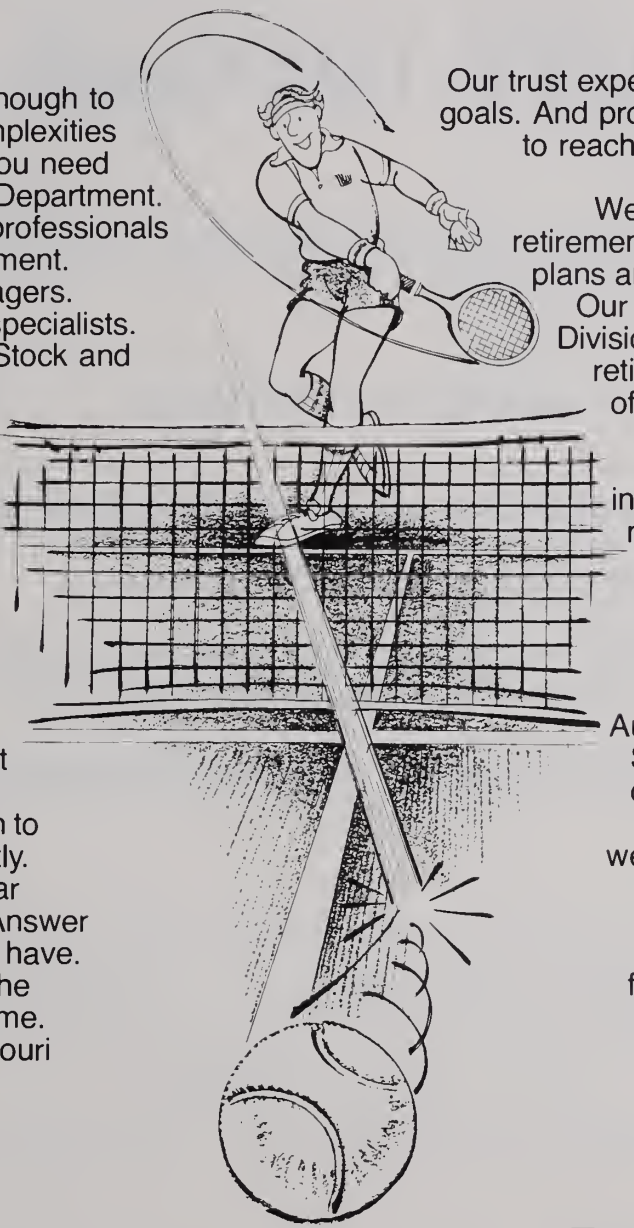
Whereas, each of these members is missed as an individual as well as for his contributions to the practice of medicine and to the Missouri State Medical Association, and

Whereas, the loss of each member is felt by all members, as well as his loved ones and close associates and the patients he has served with dedication, and

Whereas, condolences in the form of the Memoriam Perpetuam have been sent to the immediate family of each deceased member, therefore, be it

Resolved, that the House of Delegates will now pay personal tribute by standing for a moment of silence in memory of each of the 79 members we have lost and whose names will be recorded in the minutes of this Annual Session.

Walter, Archie L., Sedalia
Grindon, J. B., St. Louis
McArtor, Thomas R., Browning
Whitaker, Topsy Hatcher, East Prairie
Karandjeff, Apostle D., St. Louis
Crawford, A. L., Joplin
Stein, Arthur H., Jr., St. Louis
Damron, Oscar H., Warrensburg
Cowherd, Donald William, St. Louis
Rendleman, David D., Clayton
Fitch, Max, Brighton
Dunmire, George Q., Kennett
Robinson, George Gaylord, Kansas City
Altheide, John P., St. Louis
Murphy, John Carroll, St. Louis
Harrell, Henry J., Summerfield, Fla.
Eades, Dee William, St. Louis
Dworkin, Saul, St. Louis
Callihan, Charles F., West Plains
Schutz, Carl H., Topeka, Kan.
Estes, Jack M., Florissant
Jones, Andrew B., Soddy, Tenn.
Pollock, Leo H., Shawnee Mission, Kan.
Skilling, David M., St. Louis
Rau, Jerold M., Kansas City
Davis, Landis Y., Canton
Pipkin, Garrett, Clinton
Welner, Amos, St. Louis
Hansel, French Keller, St. Louis
Dunaway, Howard Andrew, Sikeston
Hungate, Carroll Paul, Kansas City
Konzelman, John A., O'Fallon
Edwards, Waldo, Kirkwood
Kaminsky, Watson W., St. Louis
McCool, Stanley G., St. Louis
Morley, Louise A., Shawnee Mission, Kan.
Howden, Thomas L., St. Joseph
Rudi, Herbert J., St. Louis
Skeffington, Mary Jane, Manchester
Reynolds, M. Wayne, Warrensburg
Galbol, Harley I., Sr., Excelsior Springs
Cantrell, Ooch Thomas, Jr., Butler
Roberts, Harold M., Kansas City
Sennott, John S., Port Charlotte, Fla.
Morris, Harvey E., St. Louis
Eliscu, Juliette M., Joplin
Parsons, Bernie, Albany
Keller, Louis, St. Louis
Weber, Sol, St. Louis
Deles, Vicente D., Crystal City
Carder, George A., Liberty
Wood, George H., Carthage
Forsen, James A., Chesterfield
Gullen, Diosdada, Chesterfield
Helman, Richard G., Kansas City
Freeman, David M., St. Louis
Little, Monroe, St. Louis
Metz, Charles O., St. Louis
Ryan, John, St. Louis
Allen, William E., Jr., St. Louis
Grant, Claude S., St. Joseph
Kiene, Richard H., Sr., Kansas City
Schultz, Samuel, St. Louis
Bockelman, Clifford H., St. Louis
Lucido, Joseph L., St. Louis
Newman, Percy B., St. Louis
Shelton, Edward Olney, Eldon
Ward, Robert L., Chesterfield
Pruett, Hubert S., St. Louis
Schluer, Elmer P., St. Louis
Dickerson, Gerald W., D.O., Doniphan
Murphy, Bernard L., Hannibal
Engel, Lawrence P., Shawnee Mission, Kan.
Bladow, Terrence C., Joplin
Motzel, Albert J., St. Louis
Pyne, Herbert S., St. Louis
Gentry, Enoch N., Kansas City
Rothman, David, St. Louis
Ohmoto, Masao, St. Louis



United Missouri's personal financial services advantage is your service ace.

The Service Pros.
When you need a trust department that's big enough to specialize in all the complexities of trust management, you need United Missouri's Trust Department.

Nearly two hundred professionals work in our Trust Department. Lawyers. Portfolio managers. Financial analysts. Tax specialists. Real estate managers. Stock and bond traders. Personal Bankers.

Doorstep Service.
Your United Missouri trust officer can bring all this expertise right to your home. That's how important your estate is to him.

He'll listen. To your plans. To what you want and don't want.

Then, he'll tailor a plan to meet your needs. Exactly.

He'll clarify any regular report we mail to you. Answer any question you might have. Over the phone. Or in the comfort of your own home. Whether you live in Missouri or Kansas.

The Product Advantage.
Our trust experts can help you set specific goals. And provide the products you need to reach those goals. With minimum risk along the way.

We'll show you how to plan for retirement. Advise you about pension plans and investment management.

Our Personal Financial Services Division encompasses estate and retirement planning, trusts and, of course, the full service of a Personal Banker.

We'll help maximize your investment returns. Keeping in mind both current and future needs. Very important in an increasingly complex economy.

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★ **Underwritten by "A" excellent rated company by A. M. Best Co.**

* 1952 Intercompany Disability Table, Benefit 2, Age 35

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3609 NE 62nd Terrace
Kansas City, Mo. 64119
816-455-3400

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NAME ______________________

ADDRESS ______________________

CITY/STATE ______________________

ZIP __________ PHONE __________

124th ANNUAL SESSION EXHIBITORS

Accounts Receivable Management Corporation, St. Louis
Allergy and Immuno Diagnostics, Ltd., Kansas City
Ames Division, Miles Laboratories, Inc., Elkhart, Ind.
Antigen Laboratories, Inc., Liberty
Biomedical Reference Labs, Inc., Burlington, N. C.
Blue Shield of Kansas City, Blue Shield of St. Louis, Kansas City
Boehringer Ingelheim, Ridgefield, Conn.
Boots Pharmaceuticals, Shreveport, La.
Ciba Pharmaceutical Company, Arlington, Tex.
Data Service Agency, Inc., Maryland Heights
Dorsey Laboratories, East Hanover, N. J.
Encyclopaedia Britannica, Chicago, Ill.
Forrest T. Jones & Company, Inc., Kansas City
Fred S. James & Company of Missouri, Inc., Kansas City
Geigy Pharmaceuticals, Edina, Minn.
General Data Systems, St. Louis
Glaxo, Inc., Ft. Lauderdale, Fla.
International Clinical Labs, Inc., St. Louis
International Medical Electronics, Ltd., Kansas City
The Key Company, St. Louis
R. J. Legere & Company, Inc., Scottsdale, Ariz.
Med-Equip-Co., Columbia
Medical Defense Associates, Ltd., Springfield
The Medical Protective Company, Fort Wayne, Ind.
MEDICOMP, Valley Center, Kan.
Merck Sharp & Dohme, West Point, Penn.
METPATH, Inc., Des Plaines, Ill.
Mid-America Computing, Inc., Shawnee Mission, Kan.
Midwest Organ Bank, Kansas City
Miles Pharmaceuticals, West Haven, Conn.
Mo. Citizens for Life, Kansas City
Missouri Division of Health, Bureau of Prevention of Mental Retardation, Jefferson City
Missouri Medical Insurance Company, St. Louis
Missouri Pork Producers Association, Boonville
Organon Pharmaceuticals, West Orange, N. J.
Pieroth Brothers, Overland Park, Kan.
Roche Laboratories, Nutley, N. J.
William H. Rorer, Inc., Fort Washington, Penn.
Rowell Laboratories, Inc., Baudette, Minn.
W. B. Saunders Company, Shawnee Mission, Kan.
SBAA Marketing, Inc., Cape Girardeau
Schering Corporation, Columbia
Searle Laboratories, Chicago, Ill.
SmithKline Clinical Labs, Inc., St. Louis
Smith Kline & French Laboratories, Philadelphia, Penn.
Social Security Administration, Kansas City
Southern Medical Association, Birmingham, Ala.
Szasz Atelier, Inc., Kansas City
SYCOM, Madison, Wis.
Syntex Laboratories, Palo Alto, Calif.
The Upjohn Company, Kansas City
Upjohn Healthcare Services, St. Louis
U. S. Air Force, Kansas City
US Army Medical Department, Washington, D. C.
Wallace Laboratories, Cranbury, N. J.

In lieu of Exhibits, the following firms made cash donations to assist in the sponsorship of Scientific Sessions:

Bristol Laboratories, Syracuse, New York
Eli Lilly and Company, Indianapolis, Indiana
Para Medical Distributors, Kansas City
Summit Medical, Lee's Summit

DO IT TODAY!

Remember that your contribution to the MSMF is tax-deductible. This coupon is for your convenience.

TO: MISSOURI STATE MEDICAL FOUNDATION
P.O. Box 1028, Jefferson City, Mo. 65102

I enclose my donation of $.......... for the MSMF STUDENT LOAN FUND.

NAME ....

ADDRESS ....

....

....

Please Make Checks Payable to Missouri State Medical Foundation.

★ Another popular custom is to include a bequest to the Missouri State Medical Foundation in your last will and testament.

"Without your help . . . I simply would not have made it through medical school"

(The following letter was received from a physician who, as a student, received financial assistance from the Missouri State Medical Association members who have contributed to the Missouri State Medical Foundation. It is printed with his permission.)

Dear Doctor:

"Thank you very much for your thoughtful letter concerning receipt of my final payment on my medical student loan.

"I can well remember the feeling of destitution associated with being a reasonably good student but lacking funds with which to enroll for the next semester in medical school. Having always been, perhaps, more than adequately endowed with pride, it was a lesson in discipline and humility to go seeking financial assistance. However, the effort brought me in contact with some very nice people who really do a lot to keep one's faith in human nature alive.

"I sincerely appreciate the efforts which you and others put into the Missouri State Medical Foundation and all other student loan funds. You should feel a quiet heroism for the assistance you lend to needy students . . . without your help, I simply would not have made it through medical school."

The Missouri State Medical Foundation—MSMF—was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

Send a Check Today to MSMF!

MISSOURI STATE MEDICAL FOUNDATION

113 Madison St., Jefferson City, Missouri 65102

• SPONSORED BY THE MISSOURI STATE MEDICAL ASSOCIATION •

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 501(c)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Missouri State Medical Foundation

Annual Meeting
Hyatt Regency Hotel, Kansas City
Friday, April 2, 1982

The Annual Meeting of the Missouri State Medical Foundation was called to order by Dr. Miles C. Whitener, vice-president.

The minutes of the 1981 Annual Meeting, the activities report for the MSMF 1981-1982 and the auditor's report were approved as published in MISSOURI MEDICINE.

Dr. Gary A. Dyer, chairman of the nominating committee, recommended that Dr. Miles C. Whitener and Dr. Mary E. S. Case be reappointed to serve another five-year term. Dr. Carl C. Pearman of Joplin was recommended to complete the unexpired term of Dr. Marvin Singleton of Joplin. The ex-officio member of the Board will be John I. Matthews, M.D., president of the Missouri State Medical Association. The nominating committee report was unanimously approved.

There was considerable discussion relating to the increased demand on funds provided by the Missouri State Medical Foundation. A motion to continue allocating $2,000 annually to students demonstrating financial need was approved.

Dr. Whitener called for new business.

There was considerable discussion pertaining to an increase in the assessment of members of the MSMA for the Foundation. A motion was made, seconded and approved to present a request to the MSMA that the Board of Trustees of the MSMF have input into the deliberations of the committee established by the Council to study the activities of the Foundation.

Presently, each member of the MSMA is assessed $10 annually that is earmarked for the Foundation. A motion to increase this assessment by an additional $10 was approved. This action is to be transmitted to the committee established by the Council for their consideration.

Having no further business, the Annual Meeting was adjourned.

Board of Trustees
Hyatt Regency Hotel, Kansas City
Friday, April 9, 1982

The meeting of the Board of Trustees of the Missouri State Medical Foundation was called to order by Miles C. Whitener, M.D.

The nominating committee presented the following slate of officers who were elected by acclamation:

President — Miles C. Whitener, M.D.
Vice-President — Mary E. S. Case, M.D.
Secretary-Treasurer — Robert H. Tanner, M.D.
Mr. Ron Ellison was reappointed Assistant Secretary.

Other members of the Board of Trustees are Dr. Max S. Franklin, St. Louis; Dr. Gary A. Dyer, St. Joseph; Dr. Albert D. Cross, Trenton; Dr. Larry P. Courter, Jefferson City; Dr. John P. Sargent, Sikeston; and Dr. Frederick W. Hahn, Kansas City.

President Whitener announced that contributions received in 1981 totalled $9,411.

There being no further business, the meeting was adjourned.

Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

REGISTRATION OF THE 124TH ANNUAL CONVENTION

First Councilor District — 51

Arst, H. E., Kansas City
Baker, Warren C., Savannah
Bare, E. F., Tarkio
Bauman, Henry C., Maryville
Boone, Daniel C., N. Kansas City
Bowles, Richard P., Liberty
Castillo, Michael E., Liberty
Christ, Martin H., St. Joseph
Conrad, Joseph, Chillicothe
Cooper, Barry R., N. Kansas City
Cross, Albert D., Trenton
Dixon, John R., Brookfield
Dyer, Gary A., St. Joseph
Fakhoury, Donald A., Kansas City
Fisher, Joseph L., St. Joseph
Frey, Donald R., Savannah
Hagan, John C., N. Kansas City
Harr, Patrick B., Maryville
Hedges, Richard C., N. Kansas City
Herman, Allen, St. Joseph
Howell, B. D., Brookfield
Humphrey, James, Mound City
Jimenez, Jose, St. Joseph
Katf, Nicola, Kansas City
Kelly, Joseph C., Liberty
Kuenzi, Donald E., Kansas City
Latimer, Walter N., Kansas City
Lockard, Orlyn, Jr., St. Joseph
Luckenbill, P. T., Plattsburg
McCray, Stephen A., Cladstone
McDonald, Wallace, St. Joseph
Mandler, George, Chillicothe
Matteson, F. B., Grant City
Moen, B. H., St. Joseph
Mou, Bin, Bethany
Murphy, James A., St. Joseph
Nixon, Edward E., Callatin
Patterson, C. D., Liberty
Petersen, H. E., St. Joseph
Piontek, James F., Liberty
Platz, John H., Carrollton
Redmond, William S., St. Joseph
Schertz, T. B., N. Kansas City
Soper, William D., Liberty
Sportsman, W. L., Smithville
Spurgat, Robert M., St. Joseph
Villahermosa, J. L., Savannah
Wadlow, Ernest E., St. Joseph
Wald, Donald, Gladstone
Wicks, Ed., Kansas City
Wilson, David E., Smithville

Second Councilor District — 9

Bukstein, M. J., Hannibal
Campbell, James E., Macon
Cohrs, Clarence C., Moberly
Kruse, Carl R., Palmyra
Middleton, John W., Louisiana
Palmer, Russell H., Palmyra
Plowman, Edward M., Hannibal
Roller, James A., Columbia
Tompson, Robert V., Moberly

Third Councilor District — 117

Abramson, Charles L., Creve Coeur
Alvarez, Ulises C., Manchester
Anglo, Luis B., St. Louis
Bailey, W. Harold, St. Louis
Balster, V. H., St. Louis
Banton, M. Roman, St. Louis
Banton, William C., St. Louis
Bardsley, John L., St. Louis
Bohigian, Ceorge, St. Louis
Bolinske, Robert E., St. Louis
Bolton, Robert L., St. Louis
Bowerman, Harold H., St. Louis
Bradley, Richard V., St. Louis
Brion, Pacelli E., St. Louis
Brown, Seymour, Chesterfield
Callaghan, Cerard M., St. Louis
Case, Mary E., St. Louis
Catanzaro, Rudolph E., St. Louis
Cole, Harry, St. Louis
Colosi, Nicholas J., St. Louis
Cooper, T. J., St. Louis
Costello, Cyril, St. Louis
Costrino, J. A., St. Louis
Cuddihee, Robert, St. Louis
Dames, Richard J., St. Louis
Dash, Ira R., St. Louis
Dash, Udaya N., St. Louis
De Ungria, Pablo, St. Louis
Dickler, Donald J., St. Louis
Dugas, Henry C., St. Louis
Dumadag, Virgilio P., Chesterfield
Edwards, James E., St. Louis
Evens, Ronald, St. Louis
Fallon, Richard H., St. Louis
Finkel, B. W., St. Louis
Fisher, Linda A., St. Louis
Flanigan, Ceorge D., Jr., St. Louis
Floro, Mariano N., Jr., St. Louis
Friedman, Paul L., St. Louis
Cellman, Elliot F., Creve Coeur
Coldman, Cordon M., St. Louis
Gomez, C. A., St. Louis
Crundmann, William H., St. Louis
Haddock, James N., St. Louis
Halverson, John D., St. Louis
Hamilton, Thomas R., Shawnee Mission
Hawkins, Ceorge L., Jr., Webster Croves
Herjanic, M., St. Louis
Hummel, William C., St. Louis
Jean, J. T., St. Louis
Kayes, Jack, St. Louis
Kelly, R. Emmet, St. Louis
Knopf, Harry L. S., Clayton
Kolker, Allan E., St. Louis
Korenblat, Phillip, St. Louis
Kowert, Edward H., St. Louis
Kumari, Vijaya, St. Louis
Lewis, J. Eugene, St. Louis
Lieb, Francis X., St. Louis
Lottes, J. O., St. Louis
MacCaughelty, T. Cameron, St. Louis
MacDonald, Robert R., Jr., St. Louis
Machek, Otakar, St. Louis
Manion, Maria, St. Louis
Marcus, Robert, St. Louis
Mehra, Ravinder, Crestwood
Meneses, Orlando, St. Louis
Meyer, Jay, St. Louis
Meyer, Melvin E., St. Louis
Mier, Thomas, Columbia
Montes, Arturo C., St. Louis
Moritz, Gerald, St. Louis
Muncy, Gary A., St. Louis
Ohlms, David, St. Louis
Owens, William D., St. Louis
Paletta, Theodore L., St. Louis
Pardo, Leopoldo, St. Louis
Pardo, Lourdes S., St. Louis
Parwatikar, S., St. Louis
Perkins, David E., St. Louis
Ponnuru, Bhaskara M., St. Louis
Rainey, Robert, St. Louis
Rao, D. V., St. Louis
Reese, Lester T., St. Louis
Reisler, David M., Olivette
Richards, Frank O., St. Louis
Ritter, H. A., St. Louis
Roberts, John P., St. Louis
Ryall, Jo-Ellyn M., St. Louis
Santillano, A. B., St. Louis
Schultz, Irwin, Clayton
Schwartz, Melvin M., St. Louis
Schweiss, John F., St. Louis
Sciortino, John S., St. Louis
Shaw, Edward J., St. Louis
Simon, David L., St. Louis
Smith, Kenneth, St. Louis
Stein, Harry J., St. Louis
Steinberg, Franz U., St. Louis
Stokes, James M., St. Louis
Stoliar, Bruce, Florissant
Stoneman, William, St. Louis
Ternberg, Jessie, St. Louis
Thiel, J. Allen, St. Louis
Thoma, George E., St. Louis
Thurston, Don L., St. Louis
Tucker, George L., St. Louis
Velasco, Ernest T., St. Louis
Walker, Harvey, Jr., Clayton
Weiler, Thomas J., St. Louis
West, Joseph W., Kirkwood
Whitener, Miles C., St. Louis
Whittico, James M., St. Louis
Wiant, James R., St. Louis
Wilkinson, David L., St. Louis
Williams, Carol F., St. Louis
Willman, V. L., St. Louis

Fourth Councilor District — 8

Clever, Victor C., St. Charles
Damron, E. O., Elsberry
Del Pizzo, Ferdinand, Jr., St. Charles
Farrell, Sam, Washington
Miles, Wayne B., Chesterfield
Post, J. P., Washington
Richardson, W. R., Union
Workman, George M., Hermann

Fifth Councilor District — 72

Akhter, Mohammad, Jefferson City
Allen, William C., Columbia
Alyea, J. O., Columbia
Anderson, Tom R., Columbia
Barbero, Ciulio J., Columbia
Bradshaw, Bill, Columbia
Braun, Alan L., Jefferson City
Brukardt, Diane, Columbia
Bumgarner, Roger W., Columbia
Burns, Robert, Columbia
Burns, T. W., Columbia
Byland, Samuel J., Wellsville
Cohen, Harry B., Columbia
Cooper, Charles W., Jefferson City
Cope, James C., Rocheport
Critchlow, Thomas, Mexico
Cunningham, Mila, Columbia
Davis, Leonard L., Jr., Mexico
DeBoard, James, Rolla
Denninghoff, James, Columbia
Durst, Henry, Fulton
Ekern, H. Peter, Mexico
Exon, C. S., Jefferson City
Favazza, Armando, Columbia
Fotopoulos, C. K., Osage Beach
Fuchs, Ceorge, Columbia
Caines, Robert W., Columbia
Gordon, Bruce J., Columbia
Gordon, James S., Jefferson City
Criffin, William T., Columbia
Cuhleman, Henry V., Jefferson City
Cunn, Victoria, Jefferson City
Hall, David C., Columbia
Heimburger, Richard, Columbia
Helikson, Mary A., Columbia
Hoxworth, Gerald M., Mexico
Jolly, Ben, Mexico
Lamberti, J. W., Columbia
Leeper, Claude K., Columbia
Marty, David, Jefferson City
Matthews, John I., Jefferson City
Miller, LeRoy J., Columbia
Mitchell, Frank L., Columbia
Moranville, B. A., II, Columbia
Moseley, Otis, Osage Beach
Nichols, W. Kirt, Columbia
Ossman, J. A., Jefferson City
Payne, David, Columbia
Perry, Michael C., Columbia
Pickens, James M., Columbia
Rall, Kenneth L., Columbia
Rodes, Ned D., Mexico
Ross, Cilbert, Jr., Columbia
Russell, Carth S., Columbia
Schokker, J., Jefferson City
Stauffer, H. B., Jefferson City
Stauffer, Larry, Jefferson City
Stephenson, Hugh E., Jr., Columbia
Stuart, Byron M., Boonville
Summers, Joseph S., Jr., Jefferson City
Tanner, R. H., Jefferson City
Terry, Boyd E., Columbia
Thomas, Robert M., Columbia
Wankum, Robert P., Jefferson City
Washburn, J. Loren, Versailles
Watts, Byron E., Jefferson City
Weiss, James J., Jefferson City
Weiss, James M. A., Columbia
Werth, Joe, Jefferson City
Willcox, Roger, Columbia
Winn, Ceorge W., Boonville
Yarbro, J. W., Columbia

Sixth Councilor District — 25

Azan, Kenneth, Sedalia
Campbell, Albert J., Sedalia
Davault, C. K., Richmond
Frank, Cael R., Sedalia
Jones, Keith D., Warrensburg
Kelling, Jordan, Waverly
King, Richard H., Clinton
Knipschild, B. F., Marshall
LaHue, W. C., Lexington
Lederer, C. M., Warrensburg
McCorkle, E. Lee, Marshall
Magee, Robert L., Eldorado Springs
Maxson, T. Reed, Warrensburg
Meyer, Jerry L., Concordia
Moore, Candice A., Nevada
Moore M. Ted, Nevada
Morton, Wayne, Osceola
Papreck, K., Marshall
Pavlu, Robert R., Carrollton
Raynor, Richard, Marshall
Smith, James O., Clinton
Thompson, F. L., Nevada
Wheeler, Robert L., Harrisonville
Williams, John W., Oak Grove
Worley, Charles A., Sweet Springs

Seventh Councilor District — 205

Alberg, Marvin R., Kansas City
Aldridge, John, Lee's Summit
Ames, Mary B., Merriam, KS
Amoury, Raymond, Kansas City
Arbab, A., Kansas City
Arms, Arnold V., Kansas City
Ashby, Jennifer, Kansas City
Ashcraft, Keith W., Kansas City
Barelli, Pat A., Kansas City
Barry, William, Kansas City
Beck, Calvin E., Kansas City
Becker, Richard R., Kansas City
Behrends, Steven H., Kansas City
Beller, Thomas A., Overland Park, Kan.
Berry, Maxwell G., Kansas City
Binda, Robert E., Jr., Prairie Village, Kan.
Blim, R. Don, Kansas City
Braverman, David, Overland Park, Kan.
Brook, Charles J., Kansas City
Brown, Elwyn S., Kansas City
Brumm, Lawrence W., Kansas City
Bruner, Robert E., Kansas City
Bryan, W. H., Kansas City
Buchanan, Barbara, Kansas City
Buhler, Victor B., Kansas City
Caldwell, John, Kansas City
Carlson, Hjalmar, Kansas City
Carlson, John S., Kansas City
Caruso, Alfred A., Kansas City
Case, William F., Kansas City
Caughron, Michael R., Kansas City
Chandler, Robert A., Kansas City
Chaudhary, M. A., Overland Park, Kan.
Childs, Donnalea, Kansas City, Kan.
Cibis, Gerhard W., Kansas City
Clark, I. H., Kansas City
Clothier, Robert W., Independence
Coffey, Ralph R., Kansas City
Coffin, Helen K., Shawnee Mission, Kan.
Cohen, Lawrence S., Kansas City
Colglazier, Mary C., Kansas City
Cotton, Thomas R., Kansas City
Curran, Kevin E., Prairie Village, Kan.
Curts, Calvin, Kansas City
Davidson, Kendrick C., Leawood, Kan.
Deeken, James, Kansas City
Dixon, G. David, Kansas City
Dlabal, Luke J., Sr., Independence
Dorsch, Ervin H., Independence
Dorzab, Bill, Kansas City
Drake, Roy F., Kansas City
Duerksen, Joseph J., Shawnee Mission, Kan.
Duggan, Eileen, Kansas City
Dwyer, David S., Prairie Village, Kan.
Ericsson, Samuel, Kansas City
Evans, Lawrence L., Kansas City
Everett, James E., Kansas City
Fairchild, Robert C., Kansas City
Fayne, Fred A., Kansas City
Feist, George V., Kansas City
Ferris, Carl R., Kansas City
Fisher, James K., Leawood, Kan.
Flatley, John A., Kansas City
Fletcher, Robert, Kansas City
Flynn, James M., Kansas City
Fortin, David, Kansas City
Franklin, Curtis U., Jr., Kansas City
Geiger, William A., Jr., Kansas City
Gholkar, V. R., Kansas City
Goheen, John R., Kansas City
Goldman, Stanley, Kansas City
Goodson, William, Jr., Kansas City
Green, Thomas, Independence
Griffin, Donald R., Kansas City
Griffith, John A., Kansas City
Hahn, Fred W., Kansas City
Haight, J. Max, Kansas City
Hamburger, Stephen, Kansas City
Hannas, R. R., Kansas City
Hardy, H. M., Shawnee Mission, Kan.
Hardy, J. W., Kansas City
Harrin, William R., Kansas City
Hartzler, Geoffrey O., Kansas City
Hazen, Robert M., Kansas City
Heilman, Edward J., Kansas City
Helling, Thomas S., Kansas City
Herman, Edwin M., Kansas City
Hervey, W. H., II, Shawnee Mission, Kan.
Hickerson, William H., Independence
Hirsch, Joe E., Kansas City
Hoech, George P., Kansas City
Hof, David G., Kansas City
Hollinger, L. A., Kansas City
Holton, Edward B., Independence
Hopkins, James P., Kansas City
Hotchkiss, Robert L., Kansas City
Hughes, Mike, Kansas City
Hughes, Robert E., Kansas City
Hunkeler, John D., Kansas City
Hutson, Bruce, Kansas City
Hyde, L. L., Kansas City
Jacobs, Morton, Kansas City
Johnson, Dallas A., Kansas City
Jonas, Harry S., Kansas City
Jones, Gale O., Shawnee Mission, Kan.
Jones, Samuel T., Kansas City
Kanarek, Joseph, Kansas City
Kayanan, J. C., Kansas City
Keairnes, Harold W., Kansas City
Kelling, Douglas, Overland Park, Kan.
Kelly, Charles R., Kansas City
Kenney, John D., III, Leawood, Kan.
Kent, Bela K., Kansas City
Kernodle, Jeff D., Kansas City
Khoury, Cecile, Leawood, Kan.
Koon, Ben, Bolivar
Kretzschmar, Robert, Kansas City
Kunz, Stephen R., Leawood, Kan.
Kyger, John E., Independence
Layle, John, Kansas City
Lee, King Y., Kansas City
Leibshon, Joel, Shawnee Mission, Kan.
Lichtor, Joseph, Kansas City
Linville, Howard E., Kansas City
Loftus, Loretta, Shawnee Mission, Kan.
Long, Stacy, Kansas City
MacGee, Edwin, Kansas City
McCallister, Ben D., Kansas City
McCanse, Andrew, Kansas City
McIntosh, Donald E., Kansas City
McIntyre, John, Kansas City
Mallow, James, Leawood, Kan.
Masucci, Joseph, Kansas City
Matta, Camille, Kansas City
Medlicott, William J., Kansas City
Melia, B. J., Kansas City
Michelson, R. B., Kansas City
Miller, Clint L., Lee's Summit
Miller, Gerald L., Shawnee Mission, Kan.
Miller, Gerald L., Jr., Kansas City
Mitra, N. K., Kansas City
Moreano, Armando H., Kansas City
Morgan, David B., Kansas City
Morrison, Donald H., Kansas City
Muench, Laurence W., Leawood, Kan.
Munyan, E. A., Independence
Murray, W. Lee, Overland Park, Kan.
O'Hearne, John J., Kansas City
O'Malley, James F., Kansas City
Oxley, Dwight, Kansas City
Ozar, Milton B., Kansas City
Pakula, Sidney F., Kansas City
Pardo, Lillian, Kansas City
Parkins, George K., Kansas City
Peterson, W. R., Kansas City
Piebenga, L., Kansas City
Piepergerdes, Larry G., Lake Winnebago
Place, K. Craig, Kansas City
Politi, Gregory, Shawnee Mission, Kan.
Porter, Michael J., Shawnee Mission, Kan.
Raich, Robert A., Kansas City
Reddy, S. K., Kansas City
Reister, Dorothy D., Shawnee Mission, Kan.
Renner, John H., Kansas City
Rhodes, Andrew J., Independence

(Continued on next page)

In 1977, when
the Veterans Administration
compared Step-2
regimens in 450 mild
hypertensive patients,
which regimen was
proven most effective?[1]

Ross, Robert, Kansas City
Saferstein, Lester, Prairie Village, Kan.
Samuelson, Edward A., Kansas City
Sanders, Donald C., Kansas City
Sanders, William F., Kansas City
Santoro, C. G., Kansas City
Schillie, Gene A., Kansas City
Schlozman, Daniel L., Kansas City
Schottman, G. W., Kansas City
Schwegler, Robert C., Overland Park, Kan.
Shelden, Russell D., Kansas City
Siegel, Carl D., Kansas City
Slickman, R. A., Kansas City
Smith, Katherine W., Kansas City
Smith, O. Dale, Kansas City
Spalding, Wilber B., Jr., Kansas City
Stewart, Harry A., Kansas City
Szabados, Ernest D., Independence
Szymanski, Dennis C., Kansas City
Throne, E. M., Kansas City
Tiojanco, Milagros L., Kansas City
Titterington, F. W., Kansas City
Trimble, George X., Kansas City
Trowbridge, Barnard C., Kansas City
Underwood, Dick H., Kansas City
Vaughn, James W., Kansas City
Venegoni, Robert L., Mission Hills, Kan.
Volk, G. E., Leawood, KS
Waddell, Tom, Leawood, KS
Waeckerle, Joseph F., Kansas City
Waldman, Steve, Kansas City
Wall, Harry C., Kansas City
Wheeler, Charles, Kansas City
White, S. F., Kansas City
Willoughby, James W., Kansas City
Youll, Donald, Kansas City
Youmans, R. A., Kansas City
Ziemianski, Matthew, Kansas City
Zoller, David D., Kansas City
Zukaitis, Mark G., Westwood Hills, Kan.

Eighth Councilor District — 57

Ancheta, Apolianario A., Springfield
Anderson, Paul B., Neosho
Arnold, Jim, Joplin
Ashley, Thomas E., Springfield
Betz, Richard J., Neosho
Bizek, Joseph L., Aurora
Burkey, Jordan W., Springfield
Campbell, Daniel C., Jr., Mt. Vernon
Chaffin, Jerald, Branson
Chase, Ned B., Jr., Joplin
Clarke, Michael S., Springfield
Corry, F. M., Springfield
DeTar, B. E., Joplin
Domann, Darrel, Springfield
Ferguson, John P., Springfield
Frogge, Jim, Joplin
Gaston, Sam L., Joplin
Gentry, Michael, Springfield
German, Walter A., Springfield
Gillispie, Roy, Branson
Glover, Kenneth, Mt. Vernon
Hall, David W., Rogersville
Hall, Durward G., Springfield
Hellam, Duane C., Springfield
Hoffin, James J., Branson
Huewe, Douglas A., Springfield
Ivy, H. B., Springfield
Janeczko, G. F., Springfield
Johnson, W. B., II, Springfield
Koon, Ben, Bolivar
LeFevre, Philip J., Springfield
Loeb, Richard J., Springfield
Lorenc, Ernest, Springfield
Lurie, Hal H., Springfield
Macdonnell, T. M., Marshfield
McAlhany, Howard, Springfield
McCraw, Doyle, Bolivar
Menchetti, Don, Springfield
Moore, DeArmond, Springfield
Muegge, F. D., Springfield
Newman, Mary, Cassville
Olive, George C., Neosho
Pearman, Carl C., Joplin
Peterson, Stanley S., Springfield
Roberts, Howard, Joplin
Rosen, William K., Springfield
Shelton, Wayne, Springfield
Singleton, M. A., Joplin
Spalding, D. L., Springfield
Sullivan, Dan T., Springfield
Wachter, Ronald M., Springfield
Walker, Gary K., Springfield
Wall, N. R., Springfield
Whitlock, C. C., Springfield
Willcoxon, R., Joplin
Wolfe, James, Jr., Springfield
Wooldridge, Wilfred E., Springfield

Ninth Councilor District — 11

Cooper, Claude W., Thayer
Faizullah, Abulbasher M., Mansfield
Fowler, Marvin L., West Plains
Hasek, James A., Mountain Grove
Hasek, O. Martin, Mountain Grove
Choudhury, M. H., Mountain Grove
Paskon, Seth, Salem
Preston, Bruce, West Plains
Spears, Joe L., Cabool
Wall, Joe A., Houston
Wiles, Jack N., West Plains

Tenth Councilor District — 22

Albano, Benjamin I., Crystal City
Blank, Michael K., DeSoto
Chapman, Jean A., Cape Girardeau
Comeau, Richard, Dexter
Cundiff, H. Clay, Cape Girardeau
Eller, Gordon W., Cape Girardeau
Hansbrough, E. T., Poplar Bluff
Heeb, Max A., Sikeston
Jung, C. H., Cape Girardeau
Jung, J. Marshall, Cape Girardeau
Kasten, Melvin C., Cape Girardeau
Ladyman, George, Poplar Bluff
McGinty, Charles P., Cape Girardeau
Masters, Ed, Sikeston
Parsons, D. L., Cape Girardeau
Ritter, Raymond A., Cape Girardeau
Ritter, R. A., Jr., Cape Girardeau
Ruff, T. E., Poplar Bluff
Sargent, John P., Sikeston
Talbert, C. R., Jr., Cape Girardeau
Turner, Kirby L., Poplar Bluff
Weeks, G. R., Cape Girardeau

University of Missouri-Columbia
Student Medical Society — 5

DeSpain, John, Columbia
Hansbrough, Gene, Columbia
Harwood, Timothy, Columbia
Kletzker, G. Robert, Columbia
Webb, Kim, Columbia

University of Missouri-Kansas City
Student Medical Society — 6

Caldwell, Michael, Kansas City
Dash, Geeta, K., Kansas City
Engsbery, Hope R., Kansas City
Hallazgo, Jeffrey J., Kansas City
Kamada, Mika, Kansas City
Reardon, Tom, Kansas City

St. Louis University
Student Medical Society — 3

Brumley, David W., Maplewood
Kavanaugh, Arthur, St. Louis
Scodary, Daniel J., Hazelwood

Guest Physicians — 68

Anderson, Joseph, St. Louis
Badeen, Louis, Overland Park, Kan.
Barker-Smith, Elizabeth, Kansas City
Bower, James S., Overland Park, Kan.
Carmignani, Sharon, Columbia
Cheung, Lawrence, St. Louis
Cohen, Leonard, Clayton
Coury, John J., Port Huron, Mich.
Cramer, Quentin, Parkville
Donnell, H. Denny, Jr., Jefferson City
Duckett, Thomas G., Overland Park, Kan.
Flanagan, T., Naperville, IL
Gaston, Robert S., Little Rock, Ark.
Gillen, B. A., Prairie Village, Kan.
Goepfer, Helmuth, Houston, Tex.
Golden, David, Baltimore, Md.
Coodson, James, Dallas, Tex.
Crene, Bruce, Kansas City
Hartong, Toby J., Kansas City, Kan.
Hettinger, Michael E., Kansas City
Huerter, Quentin C., Kansas City, Kan.
Isaac, Anita M., Topeka, Kan.
Kodanaz, A. Aytekin, Fairway, Kan.
Krachmer, Jay, Iowa City, Iowa
Krueger, Kurt, Shawnee Mission, Kan.
Kruger, John L., St. Louis
Levi, Bernard, Kansas City
Liliedahl, Roger, Kansas City
Lohff, Martin R., Omaha, Neb.
McNeese, James, LaGrange, Ill.
Magrina, Javier, Kansas City, Kan.
Margreiter, J. L., Chesterfield
Mendez, Victor M., Ponce, Puerto Rico
Mestad, Peter H., Kansas City
Migliazzo, Carl, Kansas City
Millikan, Larry, New Orleans, La.
Moore, Henry, Seguin, Tex.
Musbach, John W., Green River, Wyo.
Nash, R. A., Overland Park, Kan.
Nauss, Lee, Rochester, Minn.
Nierling, Dean A., Lee's Summit
Oggel, James, Kansas City
O'Hearne-Sproull, Lillian, Kansas City
Phaneuf, Joseph, Columbia
Pippin, L. K., Kansas City
Pyron, Jim, Joplin
Racela, Luz S., Kansas City
Reber, Howard, Columbia
Renner, Greg, Columbia
Roberts, Robert, St. Louis
Rosa, Ute, Kansas City
Senhauser, Donald A., Columbus, Ohio
Smale, Brian, Columbia
Snider, Ned L., Quincy, Ill.
Spurny, Robert, Kansas City
Steele, Clarence H., Kansas City
Taylor, Steven, New Orleans, La.
Treanor, W. J., Reno, Nev.
Troia, Robert, Mission, Kan.
Turner, Marc, Lenexa, Kan.
Turner, William A., Nev.
Uhrig, Jack R., Carrollton
Varenhorst, Michael, Overland Park, Kan.
Varghese, George, Kansas City, Kan.
Yoehl, Valerie, Overland Park, Kan.
Webb, Robert W., Alton, Ill.
Willard, Robert R., Columbia
Wright, Philip, Memphis, Tenn.

There were 591 members, 68 guest physicians, 180 exhibitors, 133 MSMA Auxiliary members, 123 guests and 21 staff members. Total registration was 1,116.

In Memoriam

Joe L. Longenecker, M.D., 2844 E. 18th, Joplin 64801; graduate of Tulane University, 1956; member of Jasper County Medical Society; aged 61; died May 8, 1982.

Carl E. Lischer, M.D., 8012 Pershing, St. Louis 63105; graduate of Washington University, 1937; member of St. Louis Metropolitan Medical Society; aged 70; died May 17, 1982.

Oliver Manigo, Jr., M.D., 2241-A S. Brentwood, St. Louis 63144; graduate of Washington University, 1976; member of St. Louis Metropolitan Medical Society; aged 33; died May 19, 1982.

Lynn M. Garner, M.D., 403 Meier Dr., Jefferson City 65102; graduate of St. Louis University, 1930; member of Cole County Medical Society; aged 75; died May 21, 1982.

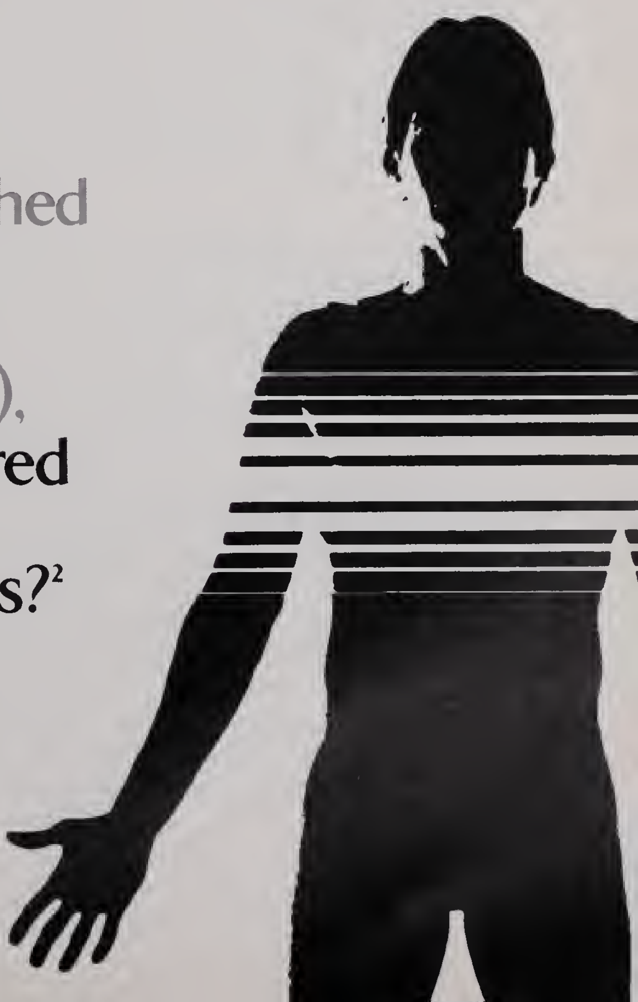
Lee Andrew McNeel, Jr., M.D., Greenfield 65661; graduate of Washington University, 1947; member of Dallas-Hickory-Polk-Dade County Medical Society; aged 58; died May 26, 1982.

Guy N. Magness, M.D., 7727 Blackberry Ave., St. Louis 63130; graduate of Washington University, 1928; member of St. Louis Metropolitan Medical Society; aged 82; died June 7, 1982.

Reprints Available!

Reprints of the address, "The Historical Background of Where American Medicine Is Today and How It Got There," by Wilfred E. Wooldridge, M.D. are now available for $1.00 each at the MSMA, P.O. Box 1028, Jefferson City, MO 65102. Dr. Wooldridge, retiring editor of MISSOURI MEDICINE, delivered the address at the General Session of the 124th MSMA Annual Convention in Kansas City in April.

In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study), **which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]**



New Members

Frederico L. Ampil, M.D., 1423 N. Jefferson, Springfield 65802, has become a member of Greene County Medical Society. Dr. Ampil is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1967. He specializes in therapeutic radiology.

Stephen D. Armstrong, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Armstrong is a native of Pomona, Calif., received his preliminary education at the University of Arkansas and his M.D. degree at the University of Missouri-Kansas City in 1976. He specializes in rheumatology and internal medicine.

Paul A. Becker, M.D., 9000 W. 105th, Overland Park, Kan. 66212, has become a member of Jackson County Medical Society. Dr. Becker is a native of Denver, Colo., received his preliminary education at Loyola University and his M.D. degree at Loyola-Stritch Medical College in 1975. He specializes in cardiology.

Kendall H. Barker, M.D., 510 S. Kingshighway, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Barker is a native of Grosse Pointe, Mich., received his preliminary education at Oberlin College and his M.D. degree at Washington University in 1979. He specializes in diagnostic radiology.

Jacques D. Blackman, M.D., 1717 Main, Higginsville 64037, has become a member of Lafayette-Ray County Medical Society. Dr. Blackman is a native of Lawrence, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1976. He specializes in family practice.

John A. Chanasue, 1035 Bellevue, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Chanasue is a native of Georgetown, Guyana, received his preliminary education at McGill University and his M.D. degree at New York University in 1976. He specializes in internal medicine and dermatology.

Dossu J. Chanduwadia, M.D., 1004 Industrial Dr., Herculaneum 63048, has become a member of Jefferson County Medical Society. Dr. Chanduwadia is a native of India, received his preliminary education at the University of Bombay and his M.D. degree at the University of Bombay in 1968. He specializes in obstetrics and gynecology.

Mahbub Chowdhury, M.D., VA Medical Center, Poplar Bluff 63901, has become a member of Butler-Wayne-Ripley-Carter Medical Society. Dr. Chowdhury is a native of Bangladesh, received his preliminary education at Government College and his M.D. degree at Dacca Medical College in 1966. He specializes in internal medicine.

Gearld L. Early, M.D., Department of Surgery, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Early is a native of St. Joseph, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Kansas City in 1973. He specializes in thoracic surgery.

Michele R. Flicker, M.D., 4801 Linwood Blvd., Kansas City 64128, has become a member of Jackson County Medical Society. Dr. Flicker is a native of New York, N.Y., received her preliminary education at Harvard University and Massachusetts Institute of Technology and her M.D. degree at Washington University in 1976. She specializes in internal medicine.

Michael E. Frederich, M.D., 820 Jefferson, Fulton, 65251, has become a member of Callaway County Medical Society. Dr. Frederich is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in family practice.

Thomas J. Harrison, Jr., M.D., 1012 N. Main, Sikeston 63801, has become a member of SEMO County Medical Society. Dr. Harrison is a native of Birmingham, Ala., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Columbia in 1972. He specializes in pediatrics.

Galen R. Hasler, M.D., 1900 S. National, Suite 2800, Springfield 65804, has become a member of Greene County Medical Society. Dr. Hasler is a native of Madison, Wis., received his preliminary education at the University of Wisconsin and his M.D. degree at the University of Wisconsin in 1972. He specializes in oncology.

David R. Hoelzer, M.D., 1321 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Hoelzer is a native of Glen Cove, N.Y., received his preliminary education at Colgate University and his M.D. degree at St. Louis University in 1979. He specializes in internal medicine.

Karen L. Hoelzer, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Hoelzer is a native of Decorah, Iowa, received her preliminary education at the University of North Dakota and her M.D. degree at St. Louis University in 1980. She specializes in internal medicine.

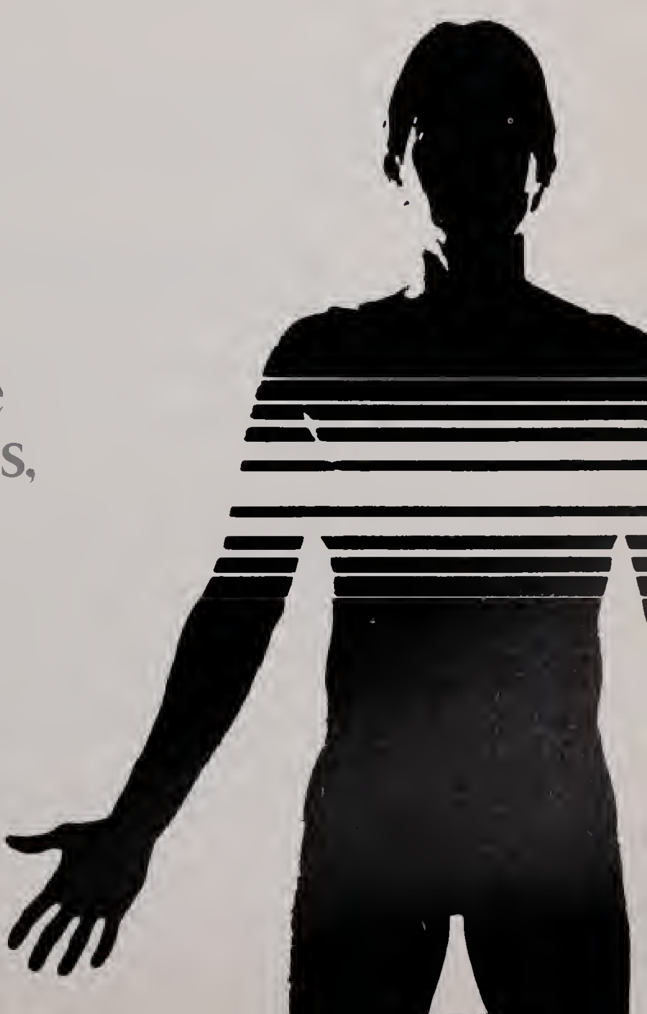
James E. Hoffman, D.O., 2210 Melrose, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Hoffman is native of Shaefferstown, Pa., received his preliminary education at Elizabethtown College and his D.O. degree at Philadelphia College of Osteopathic Medicine in 1975. He specializes in pediatrics.

Sandra S. Hoffmann, M.D., 10322 Sunset Plaza, Sunset Hills 63127, has become a member of St. Louis Metropolitan Medical Society. Dr. Hoffmann is a native of Pittsburg, Kan., received her preliminary education at the University of Kansas and her M.D. degree at Kansas University in 1976. She specializes in internal medicine and rheumatology.

Bill G. Horton, M.D., 1900 S. National, Springfield 65804, has become a member of Greene County Medical Society. Dr. Horton is a native of Kansas City, received his preliminary education at Doane College and his M.D. degree at University of Kansas in 1974. He specializes in ophthalmology.

Adian W. Ip, M.D., 2821 N. Ballas, St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Ip is a native of Hong Kong, received his preliminary education at the University of Chicago and his M.D. degree at the University of Chicago in 1979. He specializes in pediatrics.

Mohideen Abdul Jamaluddin, M.D., 305 Main, Festus 63028, has become a member of Jefferson County Medical Society. Dr. Jamalud-



In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

din is a native of India, received his preliminary education at Loyola College and his M. D. degree at Stanley Medical College in 1974. He specializes in internal medicine and gastroenterology.

Dale E. Johnston, M.D., 510 S. Kingshighway, St. Louis 63130, has become a member of St. Louis Metropolitan Medical Society. Dr. Johnston is a native of Pittsburg, Pa., received his preliminary education at the University of Pittsburg and his M.D. degree at Jefferson Medical College in 1979. He specializes in diagnostic radiology.

Jay W. Kimball, M.D., 6506 N.W. Prairie View, Kansas City 64151, has become a member of Platte County Medical Society. Dr. Kimball is a native of St. Louis, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1978. He specializes in family practice.

Soo-Ja Lee, M.D., Fulton State Hospital, Fulton 65251, has become a member of Callaway County Medical Society. Dr. Lee is a native of Korea, received his preliminary education at Korea University and his M. D. degree at Korea University in 1960. He specializes in pathology.

Karl J. Lenzenhuber, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Lenzenhuber is a native of St. Louis, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1979. He specializes in radiology.

Michael L. Loren, M.D., 7621 Canterbury, Shawnee Mission, Kan. 66208, has become a member of Jackson County Medical Society. Dr. Loren is a native of Detroit, Mich., received his preliminary education at Wayne State University and his M.D degree at Wayne State University in 1973. He specializes in allergy and immunology.

Mary S. Muscato, M.D., N-408, Division of Hematology and Oncology, University of Missouri Medical Sciences Center, Columbia 65212, has become a member of Boone County Medical Society. Dr. Muscato is a native of Philadelphia, Pa., received her preliminary education at the

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University of Pennsylvania and her M.D. degree at the University of Pennsylvania in 1975. She specializes in hematology and oncology.

Donald C. Patterson, M.D., 3401 Berrywood, Columbia 65201, has become a member of Boone County Medical Society. Dr. Patterson is a native of Columbia, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1975. He specializes in obstetrics and gynecology.

Bernard L. Shore, M.D., 4652 Maryland Ave., St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Shore is a native of Cleveland, Ohio, received his preliminary education at Washington University and his M.D. degree at Washington University in 1977. He specializes in internal medicine and pulmonary diseases.

Robert W. Smith, M.D., 1435 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Smith is a native of Prairie Point, Miss., received his preliminary education at Lane College and his M.D. degree at Meharry Medical College in 1976. He specializes in pediatrics.

David L. Staley, M.D., #4 Parkway Shopping Center, Potosi 63664, has become a member of Mineral Area Medical Society. Dr. Staley is a native of Marceline, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1976. He specializes in family practice.

Mary L. Teter, M.D., Barnes Hospital, 4950 Audubon Ave., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Teter is a native of Baltimore, MD., received her preliminary education at Immaculata College and her M.D. degree at Temple University in 1978. She specializes in psychiatry.

Gretchen A. Van Natta, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Van Natta is a native of St. Paul, Minn., received her preliminary education at Indiana University and her M.D. degree at St. Louis University in 1980. She specializes in obstetrics and gynecology.

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1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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SM-2348 11/81

LETTER to the EDITOR

THE PITFALLS OF BUREAUCRACY

To the Editor:

In 1974, Governor Bond recommended reorganization of the Executive Branch of our State Government. Most will agree such a move was in order. Prior to reorganization, there were approximately 90 separate departments functioning under the jurisdiction of the Executive Branch. What a choice plum for political patronage.

The Council of the Missouri State Medical Association was in favor of this plan but insisted that the Department of Health be maintained as a separate entity, such as the Department of Conservation. The goal of the MSMA Council was to keep the business of health out of the political arena. We encountered considerable opposition from the Governor and, eventually, the Department of Health was placed under the control of the Department of Social Services. The concerns of the MSMA were soon justified. In 1978, Governor Teasdale removed Dr. Herbert Domke as director of the Missouri Division of Health. No reason was given for this action. Recently, Mr. Barrett Toan, Director of the Department of Social Services, has fired Dr. Mohammad Akhter from this position. It is unfortunate that Dr. Akhter has no recourse to an appeal mechanism, nor have hearings been held to justify this action. It does seem strange that a political appointee, a certified public accountant, has the prerogative to dismiss a professional with Dr. Akhter's training, background and expertise.

Such arbitrary action by the Department of Social Services must not go unheeded. The citizens of Missouri are entitled to an explanation.

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Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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References:
1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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Bactrim™
(trimethoprim and sulfamethoxazole/Roche)
succeeds

Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

Expanding its usefulness in antimicrobial therapy

in recurrent UTI... a continuing record of high clinical effectiveness against common uropathogens

in acute otitis media in children... effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults... clears the sputum and lowers its volume...on *b.i.d.* dosage

in shigellosis... faster relief of diarrhea than with ampicillin[2]

BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)
Before prescribing, please consult complete product information, a summary of which follows:
Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.
For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.
For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.
For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.
Also for the treatment of documented *Pneumocystis carinii* pneumonitis.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.
Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted
Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.
Pregnancy. Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.
Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.
Dosage: Not recommended for infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:
Adults Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d for 10-14 days. Use identical daily dosage for 5 days for shigellosis.
Children. Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.
For patients with renal impairment. Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:
Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS:
Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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Bactrim™ DS

160 mg trimethoprim and 800 mg sulfamethoxazole

DOUBLE STRENGTH TABLETS

Bactrim continues to demonstrate high clinical effectiveness in recurrent urinary tract infections. Bactrim reaches effective levels in urine, serum, and renal tissue[1]...the trimethoprim component diffuses into vaginal secretions in bactericidal concentrations[1]... and in the fecal flora, Bactrim effectively suppresses Enterobacteriaceae[1,2] with little resulting emergence of resistant organisms.

1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. **2.** Data on file, Medical Department, Hoffmann-La Roche Inc.

maximizes results with B.I.D. convenience

ROCHE®

* due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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Missouri Medicine

Vol. 79, No. 8 (ISSN 0026-6620) August, 1982

Annual Directory

Missouri
State
Medical
Association

1982-1983 MEMBERSHIP ROSTER

125th Annual
Convention
March 17-20, 1983
Tan-Tar-A Resort
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Missouri State
Medical Association

P.O. Box 1028
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314-636-5151
August, 1982

NEWS NEWS NEWS Round-Up

Clark resigns; Youmans voted president-elect

Irving Howard Clark, M.D., has resigned as president-elect of the Missouri State Medical Association. Taking that office will be Ronald A. Youmans, M.D. Both physicians are from Kansas City.

Personal health problems was the reason Dr. Clark decided to resign.

The former Jackson County Medical Society president, Dr. Clark was elected as an MSMA vice-councilor in 1977 and became a councilor in 1978. Last year he served as chairman of the MSMA Council.

In addition, Dr. Clark is past president of the Kansas City Chapter of the American Academy of Family Physicians and a former member of the Board of Directors for the Missouri State Academy of Family Physicians.

Taking the president-elect position is Dr. Youmans, who has been a seventh district councilor. Dr. Youmans is a neurologist in private practice and chairman of the Neurology Department at Baptist Hospital in Kansas City.

In 1978, Dr. Youmans was both an MSMA vice-councilor and president of the Jackson County Medical Society. Dr. Youmans became an MSMA councilor in 1979.

An MSMA vice-councilor, Dr. James P. Hopkins, will become the new seventh district councilor. Currently Dr. Hopkins is president of the Jackson County Medical Society.

Dr. Ronald A. Youmans

Dr. Irving H. Clark

AMA seeks nominations for five major awards

The American Medical Association is seeking nominations for five major awards. These awards recognize physicians and non-physicians for their contributions to research, medical practice, medical education and community service.

Nominations for any of the awards should include a curriculum vitae and a one or two page statement of the nominee's qualifications for the award. The Board may consider a nominee for more than one award.

Nominations are being sought for the following awards:

National Year of the Disabled Person Award

In recognition of the National Year of the Disabled Person, the Board of Trustees decided to honor a disabled person or persons. Physician and non-physician candidates are eligible. Physician candidates must be AMA members. In its selection procedure, the Board will consider personal achievements or contributions to the medical profession or public.

Deadline for nominations is August 20, 1982. Nominations will be considered at the Board of Trustees September 8 - 11 meeting. The presentation will be made at the 1982 AMA Interim Meeting in Miami Beach.

Benjamin Rush Award for Citizenship and Community Service

The award consists of a $2,500 stipend and a commemorative plaque. The recipient must be a citizen of the United States, must possess an M.D. degree or its equivalent, and must have made an outstanding contribution to the community for citizenship and public service above and beyond the call of duty as a practicing physician.

Deadline for nominations is August 20, 1982. Nominations will be considered at the Board of Trustees September 8 - 11 meeting. The presentation will be made at the 1982 AMA Interim Meeting in Miami Beach.

Distinguished Service Award

This award is given to an Association member for meritorious services in the science and art of medicine. It consists of a medal, a $2,500 stipend and a citation.

(Continued on page 2)

Determination of death law becomes effective Aug. 13

The "determination of death" bill (House Bill 1223) becomes a Missouri law on August 13, 1982. Governor Christopher Bond signed the MSMA-supported bill earlier this summer.

Under the new law, death shall not be determined to have occurred unless one of the two following conditions is met: 1) when respiration and circulation are not artificially maintained, there is an irreversible cessation of spontaneous respiration and circulation; or 2) when respiration and circulation are artificially maintained, and there is total and irreversible cessation of all brain function, including the brain stem.

Such determination, as defined by the new law, must be made by a licensed physician.

Missouri's diabetes mortality drops 47.1%

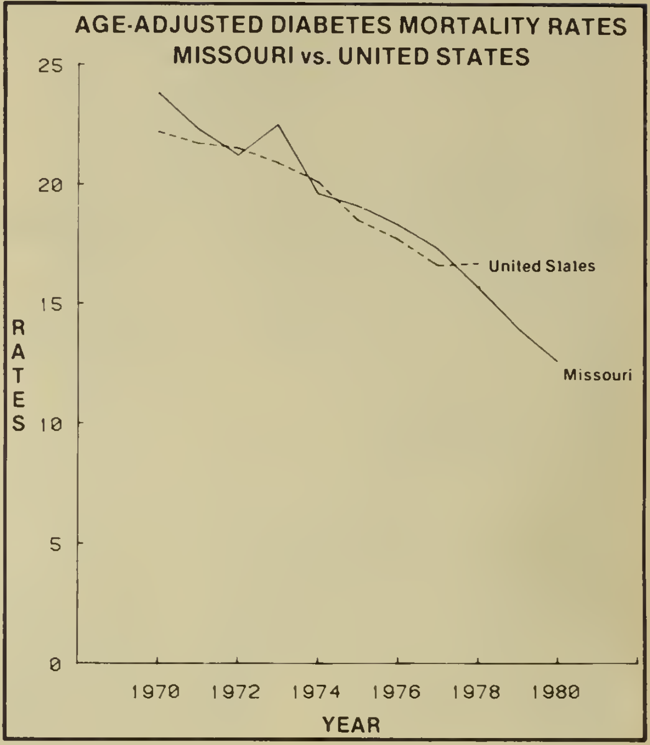
In the past 10 years, diabetes mortality has dropped 47.1% in Missouri. A study, done by the Missouri Center for Health Statistics, shows a decline from an age-adjusted rate of 23.8 deaths per 100,000 population in 1970 to a rate of 12.6 in 1980.

The Missouri Center for Health Statistics compiled these figures from Missouri death certificates, where diabetes was certified as the underlying cause of death. Cases where diabetes was recorded as a contributing cause of death and cases in which a clinical diagnosis of diabetes was not reported on the death certificate were excluded.

During 1970, diabetes accounted for 2.2% of all Missouri deaths, compared with 1980 when only 1.4% of the state's mortality resulted from diabetes. Despite this decline, diabetes was still the eighth leading cause of death in Missouri in 1980.

In 1970 Missouri's diabetes death rate was 7.2% higher than the comparable U.S. rate, but by 1978 the state rate had fallen to 6.0% below the national rate. The accompanying graph illustrates this.

One reason for the lower diabetes mortality is the link between diabetes and cardiovascular disease. The drop in diabetes mortality paralleled the rapid decline in heart disease mortality during the 1970s.



AGE-ADJUSTED DIABETES MORTALITY RATES
MISSOURI vs. UNITED STATES

Nominations . . .

(Continued from page 1)

Deadline for nominations is September 27, 1982. Nominations will be considered at the Board of Trustees October 20 - 23 meeting. The presentation will be made at the 1983 Annual Meeting in Chicago.

Citation of a Layman for Distinguished Service

The citation shall be made to a person not of the medical profession who has contributed to the achievement of the ideals of American medicine by aid and cooperation in the advancement of medical science, medical education or medical care. It consists of a suitable certificate of citation selected and approved by the Board of Trustees.

Deadline for nominations is September 27, 1982. Nominations will be considered at the Board of Trustees October 20 - 23 meeting. The presentation will be made at the 1983 Annual Meeting in Chicago.

Scientific Achievement Award

Candidates for this award can be either physician or non-physician scientists. Physician candidates must be AMA members. The award consists of a gold medallion and a $2,500 stipend.

Deadline for nominations is September 27, 1982. Nominations will be considered at the Board of Trustees October 20 - 23 meeting. The presentation will be made at the 1982 Annual Meeting in Chicago.

For more information, contact the MSMA Headquarters.

Doctors asked to stop using Aplisol for testing

An increased rate of false positive skin tests to Aplisol* PPD-Tuberculin has been reported by the Centers for Disease Control. The Center, in consultation with Parke-Davis, recommends that presently available Aplisol* should not be used for TB skin testing. A new batch of the product will be available within two months.

Bradshaw appointed to AMA Residency Committee

James H. Sammons, M.D., executive vice president of the American Medical Association, has announced that William D. Bradshaw, M.D., of Columbia, has been appointed as AMA representative to the Residency Review Committee for Family Practice.

Dr. Bradshaw is a family practitioner and director of Continuing Education and Extension for the Health Profession at the University of Missouri - Columbia Health Sciences Center.

MSMA to present second Civic Service Award

The Missouri State Medical Association is seeking nominations for its second annual Citizenship and Community Service Award. The award is designed to honor a civic-minded physician, who has significantly contributed to his/her community's betterment.

Nominations for the award should include a curriculum vitae and a one or two page statement about the nominee's qualifications for the award.

All nominations must be received by January 10, 1983. Submit nominations to MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102.

The award will be presented at the 1983 Annual Convention, March 16 - 20, at Marriott's Tan-Tar-A at Lake of the Ozarks.

Through a survey researchers find

Public favors voluntary campaign financing

The American public strongly favors voluntary campaign financing over Federal funding, according to a recently completed survey conducted by St. Louis researchers.

Civic Service, Inc.'s (CSI) findings were collected from six years of nationwide surveys, which tracked public attitudes toward campaign financing. The results were compiled following the organization's most recent sampling, March 5-19, 1982.

The 1982 survey shows that, by a margin of nearly two to one, the public opposes federal financing of Congressional Campaigns, which has been discussed in Congress. Since 1977, when CSI started surveying, opposition to this issue has persistently registered in the 60 plus percentile.

Virtually every sub-group in the sample, including all age, educational, income and political categories, disapproves of expanding public financing into congressional campaigns.

In addition, the data indicates the public disapproves of the current total financing of the fall general election campaigns through public funds. This year, the negative percentage was 65.0%.

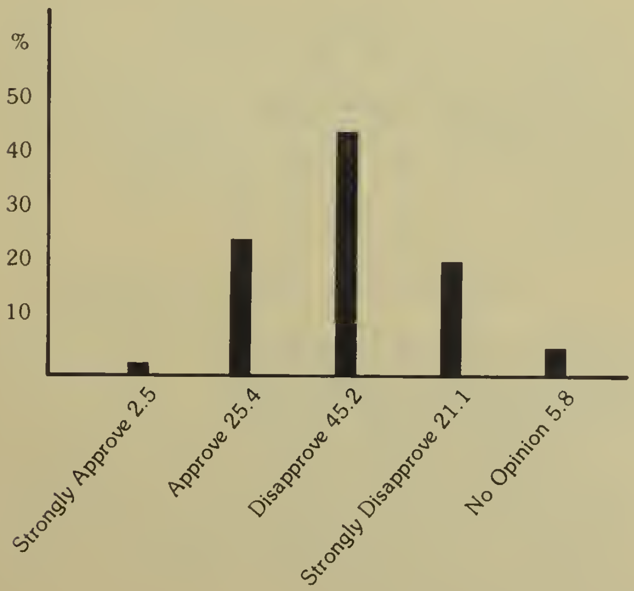
In summary, Civic Service, Inc.'s research illustrates the amount of confidence the public has in voluntary financing of political campaigns.

Also supporting voluntary financing is the Missouri Medical Political Action Committee (MMPAC), a non-profit organization consisting of physicians and their spouses. Dues go to assist political candidates who are interested in the medical profession.

For more information on MMPAC or the survey, contact MSMA Headquarters.

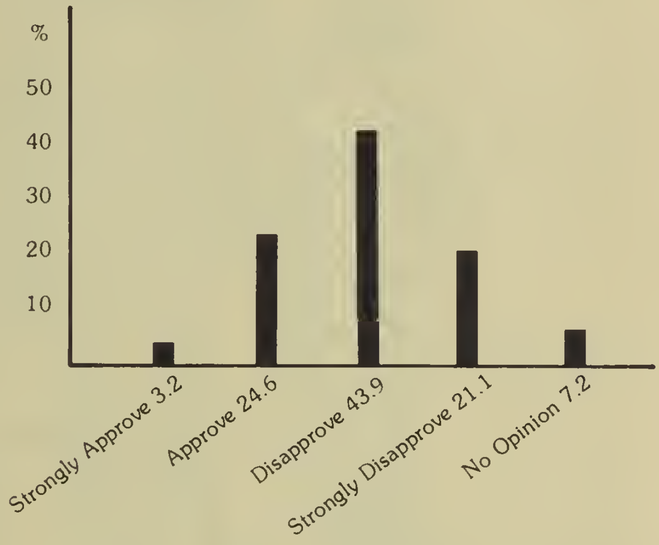
Matching Funds

"One plan is for the federal government to give an equal amount of money to a congressional candidate's campaign, matching the money the campaign raises up to a maximum of $60,000 from the government. Would you approve or disapprove of this proposal to have the federal government pay up to half of the cost of a congressional campaign through a system of matching dollars?"



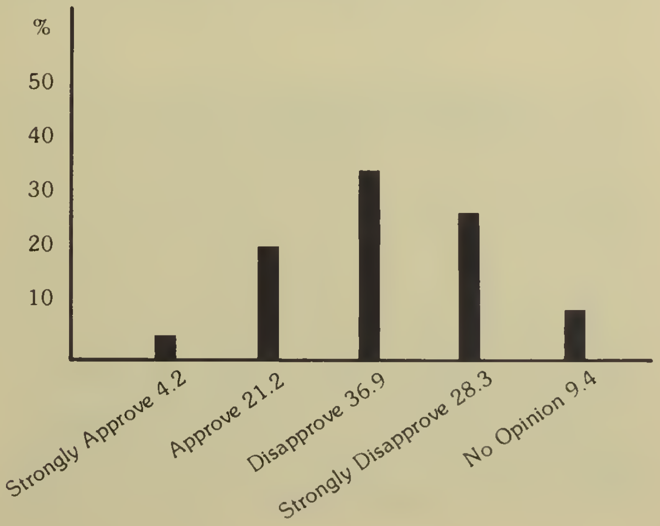
Financing Presidential Campaigns

"The 1976 and 1980 campaigns for president were financed or paid for as follows: the primary campaigns were financed in part by tax dollars through public financing and in part by private contributions ... a matching system. The fall general election campaigns were totally financed by public funds. Do you approve or disapprove of the use of public funds, federal money, to pay the total cost of the fall, general election campaigns for president such as was done for Reagan, Carter and Anderson? How strongly do you feel?"



The Benchmark Question

"It has been proposed in Congress that the Federal government provide public financing for congressional campaigns for the U.S House of Representatives and Senate. Would you approve or disapprove of the proposal to use public funds, federal money, to pay the costs of congressional and how strongly do you feel?"



Medical news in brief

New drug laws ban look-alikes, paraphernalia

Becoming effective August 13 are a package of new laws prohibiting the sale or use of imitation controlled substances, drug paraphernalia and inhalents. The laws, contained in Senate Bill 522, are the first in this state regulating the sale and possession of drug paraphernalia (i.e., "roach clips," "hash pipes," etc.) and use of inhalents, particularly toluol. During the past legislative session, MSMA pushed for passage of these laws.

With the new laws it becomes illegal for any person to manufacture, possess, have in his control, sell, prescribe, administer, dispense, distribute or compound any controlled or counterfeit substances, except for those persons who are authorized to do so (such as physicians, dentists and veterinarians).

Likewise, it is illegal for anyone to sell or possess any drug paraphernalia; also, it is illegal for a person to place advertisements about illegal drug paraphernalia.

A section of the law states that no person shall intentionally smell or inhale the fumes of any solvent, particularly toluol, or induce another person to do so, for the purpose of inducing symptoms of intoxication. This law does not apply to the inhalation of any anesthesia for medical or dental purposes.

Confiscated illegal drugs, counterfeits and paraphernalia will be turned over to the Missouri Division of Health. Upon application by any Missouri hospital, the Division of Health may in its discretion deliver any controlled substances that have come into its custody to an applicant for medicinal use. Excess stocks may be given to the United States Commissioner of Narcotics or destroyed.

University seeks manuscripts

Johns Hopkins University Press is seeking manuscripts for its new series in contemporary medicine and public health. The series will concentrate on eight topics: medical genetics, environmental health, neuro-science, comparative medicine, psychiatry, biostatistics, oncology and ophthalmology.

For more information contact Wendy Harris, science editor, Johns Hopkins University Press, Baltimore, MD 21218.

Physicians' fees increase 0.7%

During the month of June, physicians' services rose (0.7%) less than the percentage increases in both the all items component (1.2%) and the all services component (0.9%) of the Consumer Price Index.

Also, in June the percentage change in the physicians' services price index (0.7%) was less than both the percentage change in the overall medical care price index (0.8%) and the percentage change in the medical care service price index (0.8%).

During the last 12 months (June 1981 through June 1982) the percentage increase in the all services price index (10.3%) exceeded the percentage increase in the physicians' services price index (9.7%) and they both exceeded the percentage increase in the all items price index (7.1%).

Also, over the past 12 months the percentage increase in the medical care services price index (12.3%) exceeded the percentage increase in the overall medical care price index (12.0%) and they both exceeded the percentage increase in the physicians' services price index (9.7%).

PR Update

Copies of MSMA's brochure "You and Your Physician — Partners in Reducing Health Care Costs" are still available. Many physicians have distributed copies to their patients through monthly billing statements and through brochure racks in their waiting rooms.

The brochure answers frequently asked questions concerning why health care costs are rising, what physicians are doing about the problem and how patients can help.

Quantities of the brochure are available to members, at cost, at 10 cents each. For more information, contact MSMA Headquarters.

MSMA
Committee on the Impaired Physician
Confidential 24-hour
Recorded Message Telephone Number
314-636-5744

Membership certificates available to MSMA members

The Missouri State Medical Association offers certificates of membership to MSMA members in good standing. The parchment certificates are suitable for framing and provide an excellent way to inform your patients of your membership in the Association.

If you would like a certificate, please contact the MSMA office, P.O. Box 1028, Jefferson City, Missouri 65102.

Placement service offered

A list of Missouri communities seeking physicians and physicians considering locations is maintained at the MSMA Headquarters.

Location of opportunities range from the state's metropolitan areas to small, out-state locations.

Nearly all medical specialties are being sought, but family practice is the most predominant.

MSMA physicians who are seeking a new location or who are interested in attracting another physician to their area should contact the Placement Department at the MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102.

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ONE FOR ALL

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Alexandre Dumas'
The Three Musketeers
and D'Artagnan

ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

A single tablet eradicates pinworm in 95% of patients.

*Contraindicated in pregnant women and in persons who have shown hypersensitivity to the drug.

VERMOX® CHEWABLE TABLETS
(mebendazole)

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The #1 anthelmintic for pinworms and many other worm infestations

Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS
(mebendazole)

℞
Vermox
Tabs #4
Sig 1 tab
each family
member

DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 µg/ml and 0.09 µg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	–	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	–
(range)	(70-99%)	(99.5%-100%)	–	–

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets. VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

Committed to research...
because so much remains to be done.

Tableted by Janssen Pharmaceutica, Beerse, Belgium for

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JPI-282

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SEPTEMBER 25, 1982

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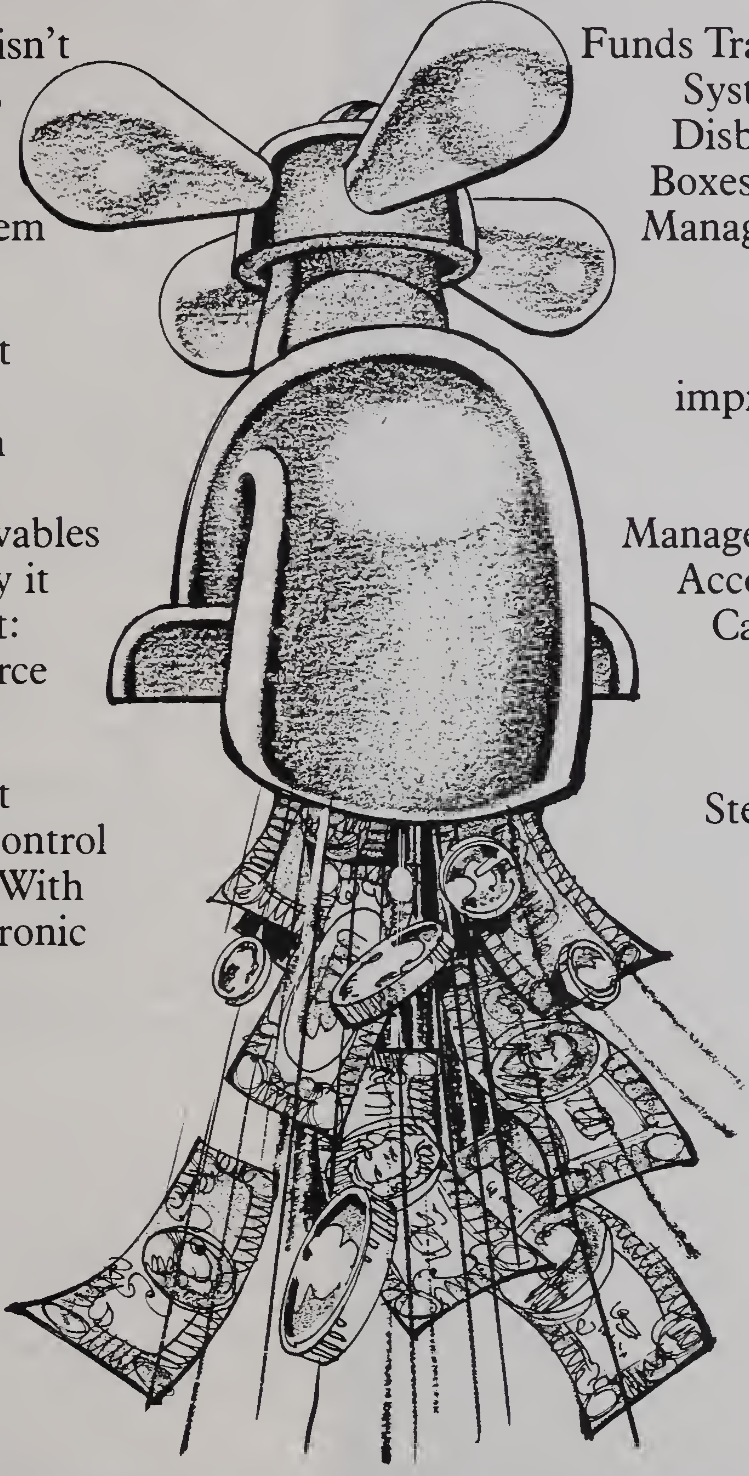

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How to Use This Roster

This Roster issue includes two lists of the members of the Missouri State Medical Association as of July 1, 1982.

The **ALPHABETICAL ROSTER** on **PAGE 461** includes each member's component society name and code number. A list of component society code numbers appear on page 443.

In the **COMPONENT SOCIETY ROSTER** beginning on **PAGE 503,** the primary specialty appears after the member's name and address. **Please note that phone numbers are now included.** See page 459 for explanation of specialty codes.

MSMA AUXILIARY

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For other departments, please refer to the table of contents above.

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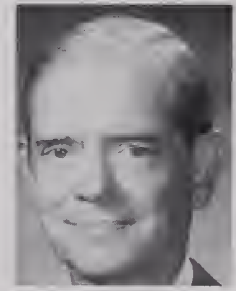

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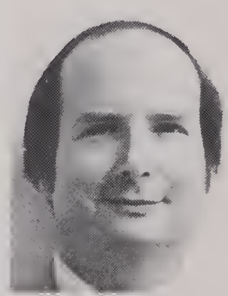

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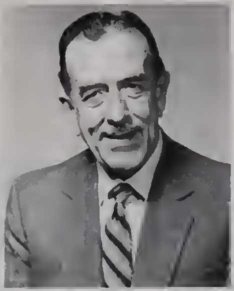
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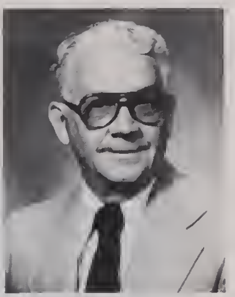
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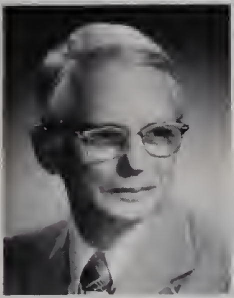
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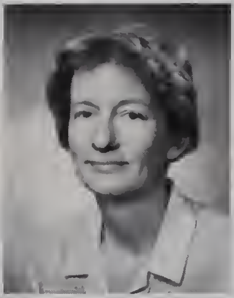
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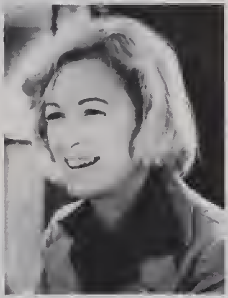
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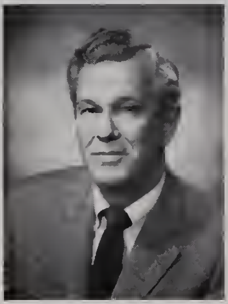
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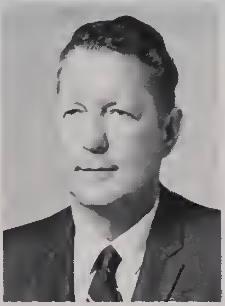
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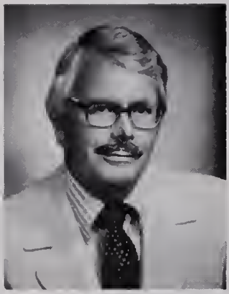

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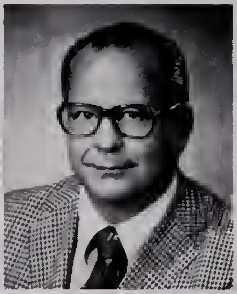

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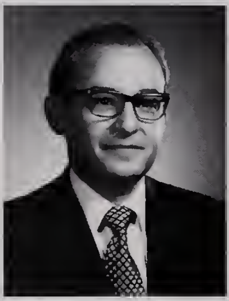

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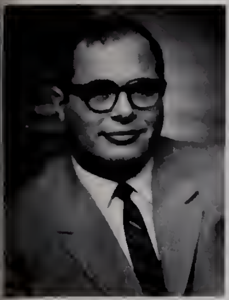

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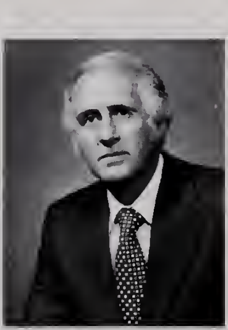

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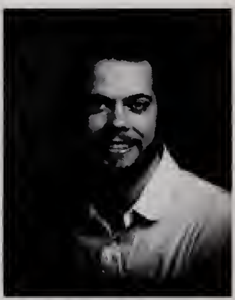

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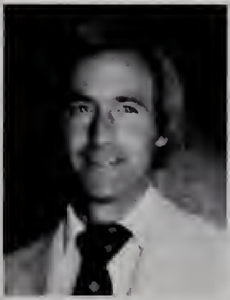

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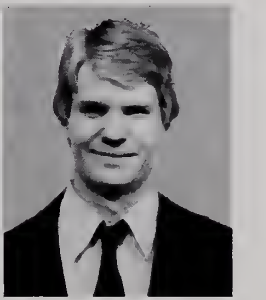

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INDERAL is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol However, such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure intensification of AV block, hypotension, paresthesia of hands arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION--*Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED

BRADYCARDIA ADMINISTER ATROPINE (0 25 to 1 0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE- DIGITALIZATION AND DIURETICS

HYPOTENSION-- VASOPRESSORS, *e g* , LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM-- ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No 461 Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 462 - Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 464 -- Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100.

No 468- Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No 3265-- Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10

Reference: 1 Freis, E D Hypertension (Suppl II) 3 230 (Nov -Dec) 1981 **7997/482**

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These Programs are especially designed for MSMA members' protection needs.

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Pinworms work the night shift

Artist's interpretation:
The nocturnal egg-laying of the female pinworm causes acute perianal itch. . .making children shift sleeplessly through the night.

Put pinworms out of work...

Promptly paralyzes pinworms and roundworms

Antiminth® (pyrantel pamoate) has a unique, rapid immobilizing effect on worms. Unlike mebendazole, which blocks glucose uptake—slowly "starving" helminths to death—Antiminth quickly acts on the neuromuscular junction to promptly paralyze parasites.

97% efficacy with a single dose

A single dose of Antiminth delivers rapid clinical and parasitological cures, "Single doses... showed high overall efficacy against *Enterobius vermicularis* (97.2%) and *Ascaris lumbricoides* (97.5%)."[1]

Simple, well tolerated therapy

Antiminth offers ease of administration and patient tolerance. "...when compared to the other single dose agents available, [Antiminth] has the advantage of being non-staining and may be better tolerated."[2]

The dosage form children like

Antiminth is available as a pleasant tasting, caramel-flavored oral suspension. Effective in just one dose against pinworm and roundworm—in both children and adults—Antiminth is easy-to-administer and easy-to-take.

Respected around-the-world

In some parts of the world, large populations are afflicted with helminthic infections. Physicians in endemic areas have become experts on parasitic diseases—and have come to rely on Antiminth for the rapid cure of infestations. Antiminth is recommended as an agent of first choice for pinworm and roundworm by leading medical authorities.[3]

Warnings

Usage in Pregnancy Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known. There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions

Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions

The most frequently encountered adverse reactions are related to the gastrointestinal system. Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration

Children and Adults Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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Pfizer Inc. New York, N.Y. 10017

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50 mg pyrantel base/ml

(pyrantel pamoate)

Cures pinworm and roundworm fast...with a single dose

MSMA Committees and Commissions 1982-1983

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A message from John I. Matthews, M.D., President of MSMA

Thank you

Each and every member of the Missouri State Medical Association should take pride in supporting organized medicine at the county and state levels. Our strength in protecting our professional freedom to give patients the best possible care and the patient's right to quality care and freedom in choosing a physician derives from individual physicians.

A word about the AMA

AMA members should be doubly proud. AMA members realize that national unity is just as important as unity among physicians in their county and state. The AMA's success on national legislative issues is widely recognized. The AMA deserves much of the credit for the establishment and maintenance of the American medical educational system's high standards of excellence. These standards have made American medicine unparalleled in the world.

Spread the word

If you are a member of MSMA, I thank you and urge you to pass this piece along to a colleague who is not a member of MSMA. I encourage you to be proud enough of your membership to ask a colleague to join.

If you are an MSMA member who is not a member of the AMA, I encourage you to extend your commitment to the only national professional society which represents all states and all specialties. We all need the AMA, and the AMA needs our support.

John I. Matthews, MD

John I. Matthews, M.D.
President, MSMA

P.S. The attached envelope may be used to request information about MSMA membership or to remit your 1982 half-year AMA dues to the Missouri State Medical Association.

See the opposite side for more details.

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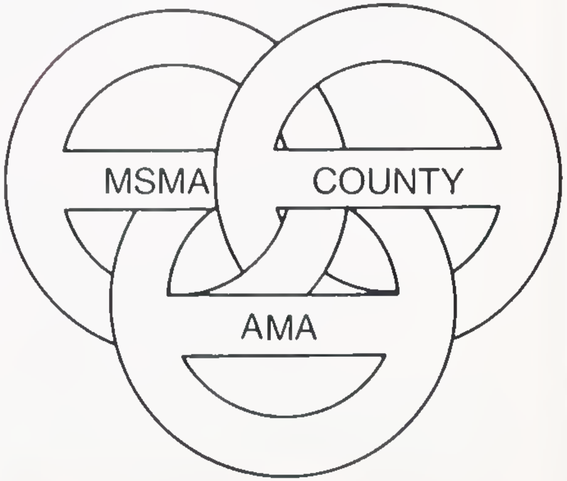
If you are a member of MSMA and AMA

Thank you for your support. Please pass this piece along to a nonmember colleague in the best interest of the profession.

If you are not a member of both MSMA and AMA

Please join with your colleagues whose time, efforts and resources benefit the entire profession. Please join your county society, MSMA, and the AMA. Simply fill out this form and return it to MSMA. If you are extending your county and state membership to include the AMA, you may remit your half-year 1982 AMA dues in this envelope.



☐ I would like to join my county society and the Missouri State Medical Association. Please send me more information and an application.

☐ I am a member of MSMA, and would like to join the AMA. Enclosed please find a check for my 1982 half-year dues.

(See AMA dues rates at right.)

Name ______________________

Address ______________________

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If you are joining the AMA, please select one of the specialty journals, which you will receive monthly, below. (You will receive the *Journal of the American Medical Association* and *American Medical News* weekly.)

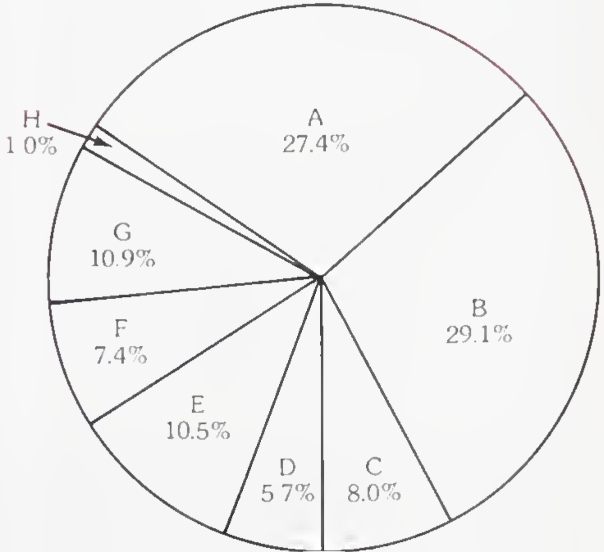
- ☐ 23 **American Journal of Diseases of Children**
- ☐ 50 **Archives of Internal Medicine**
- ☐ 77 **Archives of Otolaryngology**
- ☐ 14 **Archives of Dermatology**
- ☐ 59 **Archives of Neurology**
- ☐ 86 **Archives of Pathology and Laboratory Medicine**
- ☐ 41 **Archives of General Psychiatry**
- ☐ 68 **Archives of Ophthalmology**
- ☐ 95 **Archives of Surgery**
- ☐ 00 I do not wish to receive a specialty journal.

AMA membership dues

Category	Half-year 1982	Full year 1983
Regular	$142.50	$315.00
2nd year of medical practice	$106.50	$236.00
First year of medical practice	$ 71.00	$158.00
Intern & Resident	$ 17.50	$ 45.00
Medical Student	$ 7.50	$ 15.00

AMA Missions and Budget Allocation

Mission	1982 %
A. Representation	27.4
B. Provide Scientific Information	29.1
C. Provide Socioeconomic Information	8.0
D. Provide Data on the Profession	5.7
E. Maintain Educational Standards	10.5
F. Maintain Organizational and Federation Strengths	7.4
G. The AMA as an Organization	10.9
H. Contingency Fund	1.0
	100.00



Component Societies in Affiliation With the Missouri State Medical Association

County	District	President	Address	Secretary	Address
Andrew	1	J. L. Villahermosa	Savannah	Warren C. Baker	Savannah
Audrain	5	Raymond Wilbers	Mexico	Mary Ellen Mullen	Mexico
Barton	8	Alvin R. Cain	Lamar	Enrique Piedra	Lamar
Boone	5	J. C. Denninghoff	Columbia	R. M. Thomas	Columbia
Buchanan	1	Robert R. Stuber	St. Joseph	Theodore Kiekhaefer	St. Joseph
Butler-Wayne-Ripley-Carter	10	George McAnelly	Poplar Bluff	Ricardo Ramirez	Poplar Bluff
Callaway	5	Dilip Parulekar	Fulton	Dean Breshears	Fulton
Cape Girardeau County Area Medical Society, Inc.	10	C. R. Talbert, Jr.	Cape Girardeau	H. Clay Cundiff	Cape Girardeau
Chariton-Macon-Monroe-Randolph	2	David Fleming	Moberly	Bruce Bade	Moberly
Clay	1	John C. Hagan	N. Kansas City	Carroll Patterson	Liberty
Clinton	1	J. H. Sweiger	Plattsburg	L. A. Ozenberger	Plattsburg
Cole	5	David Marty	Jefferson City	Johannes Schokker	Jefferson City
Cooper	5	Daikichi Hata	Boonville	E. T. Humphreys	Boonville
Dallas-Hickory-Polk-Dade	8	Bill M. Carnell	Buffalo	Ruth S. Rios	Bolivar
Dunklin	10	Randall P. Kuntze	Kennett	Joe Zimmerman	Kennett
Franklin-Gasconade-Warren	4	Scott Snyder	Washington	David Brunworth	Washington
Grand River Medical Society (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	1	Bill Howell	Brookfield	John R. Dixon	Brookfield
Greene	8	E. Ruel Olson	Springfield	Robert Bennett	Springfield
Henry	6	Richard King	Clinton	Kenneth F. Scott	Clinton
Howard	5	Maurice P. Leech	Fayette	Roger Hofmeister	Fayette
Jackson	7	James P. Hopkins	Kansas City	George E. Volk	Kansas City
Jasper	8	Frank I. Clark	Joplin	Adolph Mueller	Joplin
Jefferson	10	Duk J. Park	Festus	Maria Albano	Crystal City
Johnson	6	Keith D. Jones	Warrensburg	Robert L. Cooper	Warrensburg
Laclede	9	Phillip Sherman	Lebanon	Gary Courter	Lebanon
Lafayette-Ray	6	Jeanne Demotte	Richmond	Bill LaHue	Lexington
Lake of the Ozarks Medical Society (Camden-Miller-Morgan)	5	Ted Garrison	Camdenton	Melvin R. Hayden	Camdenton
Lewis-Clark-Scotland	2				
Marion-Ralls-Shelby	2	Carl R. Kruse	Palmyra	Hiremathada Jayanandaiah	Hannibal
Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries)	9	Hugh C. Bartlett	Rolla	Neal Grannemann	Rolla
Mineral Area Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Bollinger)	10	H. D. Dierker	Farmington	Thomas N. Davis	Farmington
Moniteau	5	Kenyon S. Latham	California	L. M. Gallagher	California
Montgomery	5	Samuel Byland	Wellsville	Samuel Byland	Wellsville
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Francis Tarvydas	Edina	Milton T. English	Kirksville
Northwest Missouri Medical Society (Nodaway-Holt-Atchison-Gentry-Worth)	1	James Humphrey	Mound City	Walter E. Dean	Maryville
Ozarks Medical Society (Barry-Lawrence-Christian-Newton-McDonald)	8	Sergio Cruz	Monett	Paul Anderson	Neosho
Pemiscot	10	Andrew E. Painter	Portageville	James G. Hazel, Jr.	Hayti
Perry-Ste. Genevieve	10	John S. Yang	Ste. Genevieve	John Long	Ste. Genevieve
Pettis	6	A. J. Campbell	Sedalia	Abraham Azan	Sedalia
Pike	2	Phil Pitney	Louisiana	Phil Pitney	Louisiana
Platte	1	Hill C. Thurman	Parkville	S. Lloyd Allen	Kansas City
St. Charles-Lincoln	4	Keim L. Baird	St. Charles	Gene P. Roxas	St. Charles
St. Louis Metropolitan Medical Society	3	Thomas J. Cooper	St. Louis	Kenneth R. Smith	St. Louis
Saline	6	Richard C. Raynor	Marshall	Phillip Monroe	Marshall
SEMO County Medical Society (Stoddard-New Madrid-Mississippi-Scott)	10	Jean R. DuPont	Sikeston	Jimmy Heath	East Prairie
South Central (Howell-Oregon-Texas-Wright-Douglas-Ozark)	9	Young Kang	West Plains	Jack N. Wiles	West Plains
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Webster	8	T. M. MacDonnell	Marshfield	R. J. Bareis	Marshfield
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Guide to Component Medical Societies

Following is a list of Missouri communities in which MSMA member-physicians are in active practice or reside. Name of the community is followed by the county in which it is located and the medical society to which physicians of that community normally would belong.

Town	*County*	*Medical Society*
A		
Advance	Stoddard	SEMO
Affton	St. Louis	St. Lous Metropolitan
Albany	Gentry	Northwest Missouri
Altenburg	Perry	Perry-Ste. Genevieve
Appleton City	St. Clair	West Central
Arnold	Jefferson	Jefferson
Ashland	Boone	Boone
Aurora	Lawrence	Ozarks
Ava	Douglas	South Central
B		
Ballwin	St. Louis	St. Louis Metropolitan
Belton	Cass	West Central
Berkeley	St. Louis	St. Louis Metropolitan
Bethany	Harrison	Grand River
Bloomfield	Stoddard	SEMO
Blue Springs	Jackson	Jackson
Bolivar	Polk	Dallas-Hickory-Polk-Dade
Bonne Terre	St. Francois	Mineral Area
Boonville	Cooper	Cooper
Bourbon	Crawford	Mid-Missouri
Bowling Green	Pike	Pike
Branson	Taney	Ozarks
Braymer	Caldwell	Grand River
Brentwood	St. Louis	St. Louis Metropolitan
Bridgeton	St. Louis	St. Louis Metropolitan
Brookfield	Linn	Grand River
Browning	Linn	Grand River
Brunswick	Chariton	Chariton-Macon-Monroe-Randolph
Buckner	Jackson	Jackson
Buffalo	Dallas	Dallas-Hickory-Polk-Dade
Bunker	Dent	Mid-Mo
Butler	Bates	West Central
C		
Cabool	Texas	South Central
Cainesville	Harrison	Grand River
California	Moniteau	Moniteau
Camdenton	Camden	Lake of the Ozarks
Cameron	Clinton	Clinton
Cape Girardeau	Cape Girardeau	Cape Girardeau
Cardwell	Dunklin	Dunklin
Carrollton	Carroll	Grand River
Carthage	Jasper	Jasper
Caruthersville	Pemiscot	Pemiscot
Cassville	Barry	Ozarks
Centralia	Boone	Boone
Charleston	Mississippi	SEMO
Chesterfield	St. Louis	St. Louis Metropolitan
Chillicothe	Livingston	Grand River
Clarksville	Pike	Pike
Clayton	St. Louis	St. Louis Metropolitan
Clinton	Henry	Henry
Columbia	Boone	Boone
Concordia	Lafayette	Lafayette-Ray
Crane	Stone	Ozarks
Creve Coeur	St. Louis	St. Louis Metropolitan
Crystal City	Jefferson	Jefferson
Cuba	Crawford	Mid-Missouri
D		
Desloge	St. Francois	Mineral Area
DeSoto	Jefferson	Jefferson
Dexter	Stoddard	SEMO
Doniphan	Ripley	Butler-Wayne-Ripley-Carter
E		
East Prairie	Mississippi	SEMO
Edina	Knox	North Central
Eldon	Miller	Lake of the Ozarks
El Dorado Springs	Cedar	West Central
Elsberry	Lincoln	St. Charles-Lincoln
Everton	Dade	Dallas-Hickory-Polk-Dade
Excelsior Springs	Clay	Clay
F		
Farmington	St. Francois	Mineral Area
Fayette	Howard	Howard
Fenton	St. Louis	St. Louis Metropolitan
Ferguson	St. Louis	St. Louis Metropolitan
Festus	Jefferson	Jefferson
Flat River	St. Francois	Mineral Area
Florissant	St. Louis	St. Louis Metropolitan
Forsyth	Taney	Ozarks
Fort Leonard Wood	Pulaski	Mid-Missouri
Fredericktown	Madison	Mineral Area
Frontenac	St. Louis	St. Louis Metropolitan
Fulton	Callaway	Callaway
G		
Gallatin	Daviess	Grand River
Gashland	Clay	Clay
Gerald	Franklin	Franklin-Gasconade-Warren
Gideon	New Madrid	SEMO
Gladden	St. Louis	St. Louis Metropolitan
Glasgow	Howard	Howard
Glendale	St. Louis	St. Louis Metropolitan
Grandview	Jackson	Jackson
Grant City	Worth	Northwest Missouri
Gravois Mills	Morgan	Lake of the Ozarks
Greenfield	Dade	Dallas-Hickory-Polk-Dade
H		
Hamilton	Caldwell	Grand River
Hannibal	Marion	Marrion-Ralls-Shelby
Harrisonville	Cass	West Central
Hayti	Pemiscot	Pemiscot
Herculaneum	Jefferson	Jefferson
Hermann	Gasconade	Franklin-Gasconade-Warren
Hickman Mills	Jackson	Jackson
Higginsville	Lafayette	Lafayette-Ray
Hillsboro	Jefferson	Jefferson
Hornersville	Dunklin	Dunklin
Houston	Texas	South Central
Humansville	Polk	Dallas-Hickory-Polk-Dade
Huntsville	Randolph	Chariton-Macon-Monroe-Randolph
I		
Illmo	Cape Girardeau	Cape Girardeau
Independence	Jackson	Jackson
Ironton	Iron	Mineral Area
J		
Jackson	Cape Girardeau	Cape Girardeau
Jefferson Barracks	St. Louis	St. Louis Metropolitan
Jefferson City	Cole	Cole
Jennings	St. Louis	St. Louis Metropolitan
Joplin	Jasper	Jasper
K		
Kahoka	Clark	Lewis-Clark-Scotland
Kansas City	Jackson	Jackson
Kennett	Dunklin	Dunklin

Town	*County*	*Medical Society*
King City	Gentry	Northwest Missouri
Kirksville	Adair	North Central
Kirkwood	St. Louis	St. Louis Metropolitan
Knob Noster	Johnson	Johnson
Knox City	Knox	North Central
Koch	St. Louis	St. Louis Metropolitan

L

Town	*County*	*Medical Society*
Ladue	St. Louis	St. Louis Metropolitan
Lamar	Barton	Barton
Lawson	Ray	Lafayette-Ray
Leawood (Kan.)		Jackson
Leadwood	St. Francois	Mineral Area
Lebanon	Laclede	Laclede
Lee's Summit	Jackson	Jackson
Lemay	St. Louis	St. Louis Metropolitan
Lexington	Lafayette	Lafayette-Ray
Liberty	Clay	Clay
Linn	Osage	Cole
Lockwood	Dade	Dallas-Hickory-Polk-Dade
Louisiana	Pike	Pike

M

Town	*County*	*Medical Society*
Macon	Macon	Chariton-Macon-Monroe-Randolph
Malden	Dunklin	Dunklin
Mansfield	Wright	South Central
Maplewood	St. Louis	St. Louis Metropolitan
Marceline	Linn	Grand River
Marshall	Saline	Saline
Marshfield	Webster	Webster
Martin City	Jackson	Jackson
Maryville	Nodaway	Northwest Missouri
Memphis	Scotland	Lewis-Clark-Scotland
Mexico	Audrain	Audrain
Milan	Sullivan	North Central
Moberly	Randolph	Chariton-Macon-Monroe-Randolph
Monett	Barry	Ozarks
Montgomery City	Montgomery	Montgomery
Morehouse	New Madrid	SEMO
Mound City	Holt	Northwest Missouri
Mountain Grove	Wright	South Central
Mountain View	Howell	South Central
Mount Vernon	Lawrence	Ozarks

N

Town	*County*	*Medical Society*
Neosho	Newton	Ozarks
Nevada	Vernon	West Central
New Florence	Montgomery	Montgomery
New Haven	Franklin	Franklin-Gasconade-Warren
New London	Ralls	Marion-Ralls-Shelby
New Madrid	New Madrid	SEMO
Normandy	St. Louis	St. Louis Metropolitan
North Kansas City	Clay	Clay

O

Town	*County*	*Medical Society*
Oak Grove	Jackson	Jackson
Odessa	Lafayette	Lafayette-Ray
O'Fallon	St. Charles	St. Charles-Lincoln
Olivette	St. Louis	St. Louis Metropolitan
Osceola	St. Clair	West Central
Overland	St. Louis	St. Louis Metropolitan
Owensville	Gasconade	Franklin-Gasconade-Warren
Ozark	Christian	Ozarks

P

Town	*County*	*Medical Society*
Pacific	Franklin	Franklin-Gasconade-Warren
Palmyra	Marion	Marion-Ralls-Shelby
Paris	Monroe	Chariton-Macon-Monroe-Randolph
Parkville	Platte	Platte
Parma	New Madrid	SEMO
Pattonsburg	Daviess	Grand River
Pattonville	St. Louis	St. Louis Metropolitan
Perryville	Perry	Perry-Ste. Genevieve
Piedmont	Wayne	Butler-Wayne-Ripley-Carter
Pilot Knob	Iron	Mineral Area
Pine Lawn	St. Louis	St. Louis Metropolitan
Platte City	Platte	Platte
Plattsburg	Clinton	Clinton
Pleasant Hill	Cass	West Central
Poplar Bluff	Butler	Butler-Wayne-Ripley-Carter
Portageville	New Madrid	SEMO
Potosi	Washington	Mineral Area
Prairie Village (Kan.)		Jackson
Princeton	Mercer	Grand River

R

Town	*County*	*Medical Society*
Raytown	Jackson	Jackson
Reeds Spring	Stone	Ozarks
Republic	Greene	Greene
Rich Hill	Bates	West Central
Richmond	Ray	Lafayette-Ray
Richmond Heights	St. Louis	St. Louis Metropolitan
Rivermines	St. Francois	Mineral Area
Robertson	St. Louis	St. Louis Metropolitan
Rock Hill	St. Louis	St. Louis Metropolitan
Rockport	Atchison	Northwest Missouri
Rogersville	Webster	Webster
Rolla	Phelps	Mid-Missouri

S

Town	*County*	*Medical Society*
St. Ann	St. Louis	St. Louis Metropolitan
St. Charles	St. Charles	St. Charles-Lincoln
St. Clair	Franklin	Franklin-Gasconade-Warren
Ste. Genevieve	Ste. Genevieve	Perry-Ste. Genevieve
St. James	Phelps	Mid-Missouri
St. Joseph	Buchanan	Buchanan
St. Louis	St. Louis	St. Louis Metropolitan
Salem	Dent	Mid-Missouri
Salisbury	Chariton	Chariton-Marion-Monroe-Randolph
Sappington	St. Louis	St. Louis Metropolitan
Sarcoxie	Jasper	Jasper
Savannah	Andrew	Andrew
Sedalia	Pettis	Pettis
Shawnee Mission (Kan.)		Jackson
Shelbina	Shelby	Marion-Ralls-Shelby
Shelbyville	Shelby	Marion-Ralls-Shelby
Shrewbury	St. Louis	St. Louis Metropolitan
Sikeston	Scott	SEMO
Slater	Saline	Saline
Smithton	Pettis	Pettis
Smithville	Clay	Clay
Springfield	Greene	Greene
Stanberry	Gentry	Northwest Missouri
Steele	Pemiscot	Pemiscot
Steelville	Crawford	Mid-Missouri
Stockton	Cedar	West Central
Stafford	Greene	Greene
Sullivan	Franklin	Franklin-Gasconade-Warren
Sweet Springs	Saline	Saline

T

Town	*County*	*Medical Society*
Tarkio	Atchison	Northwest Missouri
Thayer	Oregon	South Central
Trenton	Grundy	Grand River
Troy	Lincoln	St. Charles-Lincoln

U

Town	*County*	*Medical Society*
Union	Franklin	Franklin-Gasconade-Warren
University City	St. Louis	St. Louis Metropolitan

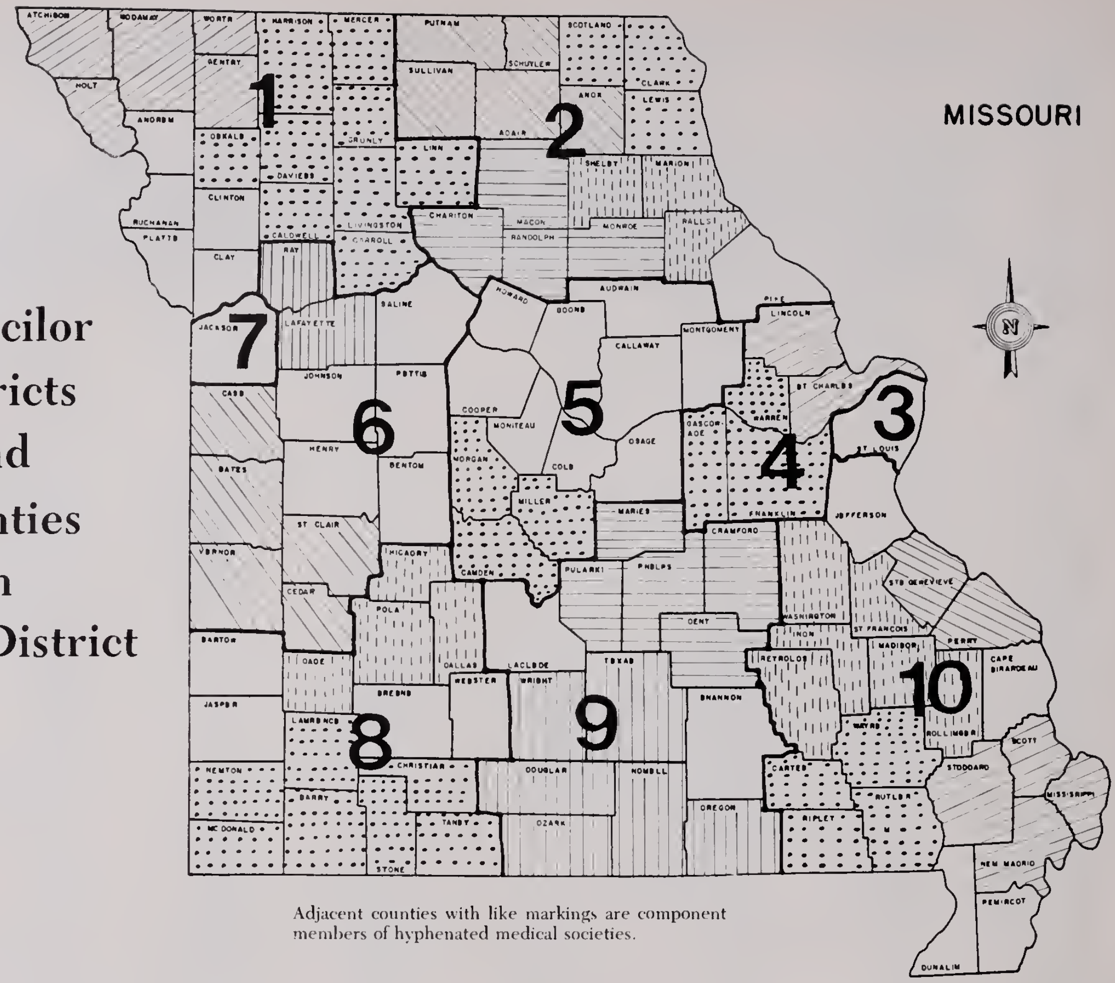
V

Town	*County*	*Medical Society*
Valley Park	St. Louis	St. Louis Metropolitan
Vandalia	Audrain	Audrain
Versailles	Morgan	Lake of the Ozarks
Vienna	Maries	Cole

W

Town	*County*	*Medical Society*
Warrensburg	Johnson	Johnson
Warrenton	Warren	Franklin-Gasconade-Warren
Washington	Franklin	Franklin-Gasconade-Warren
Waverly	Lafayette	Lafayette-Ray
Waynesville	Pulaski	Mid-Missouri
Webb City	Jasper	Jasper
Webster Groves	St. Louis	St. Louis Metropolitan
Wellsville	Montgomery	Montgomery
Wentzville	St. Charles	St. Charles-Lincoln
West Plains	Howell	South Central
Willard	Greene	Greene
Willow Springs	Howell	South Central
Windsor	Henry	Henry
Winston	Daviess	Grand River

Councilor Districts and Counties in Each District



Adjacent counties with like markings are component members of hyphenated medical societies.

DISTRICT	COUNCILOR	COUNTIES
FIRST	Richard C. Hedges, M.D., N. Kansas City	Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, DeKalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte and Worth
SECOND	Patricio Avila, M.D., Hannibal	Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby and Sullivan
THIRD	Thomas J. Cooper, M.D., St. Louis Richard H. Fallon, M.D., St. Louis James M. Stokes, M.D., St. Louis Robert R. MacDonald, Jr., M.D., St. Louis J. Otto Lottes, M.D., St. Louis Theodore L. Paletta, M.D., St. Louis Frederick D. Peterson, M.D., St. Louis	St. Louis Metropolitan
FOURTH	William R. Richardson, M.D., Union	Franklin, Gasconade, Lincoln, St. Charles and Warren
FIFTH	H. Peter Ekern, M.D., Mexico Alan H. Braun, M.D., Jefferson City	Audrain, Boone, Callaway, Camden, Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan and Osage*
SIXTH	A. J. Campbell, M.D., Sedalia	Bates, Benton,* Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline and Vernon
SEVENTH	Donald E. McIntosh, M.D., Kansas City Larry G. Piepergerdes, M.D., Kansas City Milton B. Ozar, M.D., Kansas City James P. Hopkins, M.D., Kansas City	Jackson
EIGHTH	Walter A. German, M.D., Springfield Marvin A. Singleton, M.D., Joplin	Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney and Webster
NINTH	Jack Wiles, M.D., West Plains	Crawford, Dent, Douglas, Howell, Laclede, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon,* Texas and Wright
TENTH	George H. Ladyman, M.D., Poplar Bluff	Bollinger, Butler, Cape Girardeau, Carter, Dunklin, Iron, Jefferson, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington and Wayne

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* Counties with no medical organization.

List of Designated Specialty Codes

The following specialties, including General Practice, are recognized by the American Medical Association.

AM	Aerospace Medicine
A	Allergy
AN	Anesthesiology
BE	Broncho-Esophagology
CD	Cardiovascular Diseases
D	Dermatology
DIA	Diabetes
EM	Emergency Medicine
END	Endocrinology
FP	Family Practice
GE	Gastroenterology
GP	General Practice
GPM	General Preventive Medicine
GER	Geriatrics
GYN	Gynecology
HEM	Hematology
HYP	Hypnosis
IG	Immunology
ID	Infectious Diseases
IM	Internal Medicine
LAR	Laryngology
LM	Legal Medicine
ND	Neoplastic Diseases
NEP	Nephrology
N	Neurology
CHN	Neurology, Child
NA	Neuropathology
NM	Nuclear Medicine
NTR	Nutrition
OBS	Obstetrics
OBG	Obstetrics and Gynecology
OM	Occupational Medicine
ON	Oncology
OPH	Ophthalmology
OT	Otology
OTO	Otorhinolaryngology
PTH	Pathology
CLP	Pathology, Clinical
FOP	Pathology, Forensic
PD	Pediatrics
PDA	Pediatrics, Allergy
PDC	Pediatrics, Cardiology
PA	Pharmacology, Clinical
PM	Physical Medicine and Rehabilitation
P	Psychiatry
CHP	Psychiatry, Child
PYA	Psychoanalysis
PYM	Psychosomatic Medicine
PH	Public Health
PUD	Pulmonary Diseases
R	Radiology
DR	Radiology, Diagnostic
PDR	Radiology, Pediatric
TR	Radiology, Therapeutic
RHU	Rheumatology
RHI	Rhinology
ABS	Surgery, Abdominal
CDS	Surgery, Cardiovascular
CRS	Surgery, Colon and Rectal
GS	Surgery, General
HS	Surgery, Hand
HNS	Surgery, Head and Neck
NS	Surgery, Neurological
ORS	Surgery, Orthopedic
PDS	Surgery, Pediatric
PS	Surgery, Plastic
TS	Surgery, Thoracic
TRS	Surgery, Traumatic
U	Surgery, Urological

In addition to the above specialties, the following designation is also used:

OS	Other, i.e., physician designated a specialty other than those appearing above.

Remember These Dates!

The Missouri State Medical Association

125th ANNUAL CONVENTION

will be held on

MARCH 17-20, 1983

Tan-Tar-A Resort Lake of the Ozarks

ep·i·dem·ic

/ep-a-'dem-ik/ i.e. Alcoholism 1. A disease affecting 10 million people in the United States. 2. Controlled through effective alcoholism treatment program.

Chances are, during a patient's preliminary examination, alcoholism is not one of your immediate suspicions. But with 10 million Americans suffering from this disease, and over 100,000 in the Kansas City area alone, perhaps it should be. Or perhaps the drinking problem is someone within your patient's family, causing them mental and even physical abuse.

At Bethany Medical Center's Alcoholism Rehabilitation Department (ARD), our professional staff offer both in- and outpatient programs for individuals suffering from alcoholism.

Our outpatient program is for those individuals whose affliction has not become debilitating, but recognize the need for treatment. It is specifically tailored to the individual's needs and incorporates family involvement.

Our inpatient program covers a 28-day phased treatment in a professional, yet unusual and cheery environment. Patients wear street clothes and participate in a busy, structured, daily routine that includes exercise, counseling, lectures and recreational time.

If you have a patient with a drinking problem, send for our detailed informational brochure, or personally contact one of our professional staff. Inpatient information: Sue Little, Director, Bethany Medical Center, 51 North 12th Street, K.C., KS. 66102. (913) 281-8951. Outpatient: Paul Anderson, Ph.D., Family Institute of Addiction Treatment, 7840 Washington Ave. Suite 300, K.C., KS. 66112. (913) 334-6300.

Alcoholism
Rehabilitation
Department

BMC

Bethany Medical Center

Alphabetical Roster of Members

(The alphabetical list of members includes the name and number of each member's component society.)

A

AARON, GEO	JACKSON	098
ABADA, ELEANOR S	ST. LOUIS METROP.	190
ABADA, ROLAND	ST. LOUIS METROP.	190
ABADIR, RUSHDY	BOONE	026
ABAQUETA, GAMALIEL P	JACKSON	098
ABBOUD, NABIL C	ST. LOUIS METROP.	190
ABDEL-SALAM, AHMED S	D-H-P-D	066
ABDOU, NANCY L	JACKSON	098
ABEL, CHARLES C	ST. LOUIS METROP.	190
ABEL, OLIVER	ST. LOUIS METROP.	190
ABELARDO, MIGUEL I	ST. LOUIS METROP.	190
ABELE, WM A	COOPER	062
ABELL, WALTER E	ST. LOUIS METROP.	190
ABELLA, BIENVENIDO Z	JACKSON	098
ABEND, MELVIN N	JACKSON	098
ABERCROMBIE, KEITH J	JACKSON	098
ABINOJA, CONRADO B	ST. LOUIS METROP.	190
ABODEELY, DANIEL A	ST. LOUIS METROP.	190
ABRAMS, BERNARD M	JACKSON	098
ABRAMS, MORRIS	ST. LOUIS METROP.	190
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ABROMOVICH, CHARLES N	BOONE	026
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ACETO, THOMAS	ST. LOUIS METROP.	190
ACKER, HARRY L	ST. LOUIS METROP.	190
ACKERMAN, LAUREN	ST. LOUIS METROP.	190
ACUFF, R P	BUCHANAN	030
ADAMS, CHARLES R	JACKSON	098
ADAMS, HAROLD D	BOONE	026
ADAMS, HOWARD D	CLAY	050
ADAMS, RILEY R	CAPE GIRARDEAU	042
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AFF, HELEN	ST. LOUIS METROP.	190
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AGEE, LOREN G	JACKSON	098
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AGUINALDO, JAIME A	ST. LOUIS METROP.	190
AHAD, ABDUL	BUCHANAN	030
AHAD, KHANDAKER A	C-M-M-R	046
AHADI, ABD U	ST. LOUIS METROP.	190
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AHMAD, ABU Q	JACKSON	098
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AHMAD, NASEER	ST. LOUIS METROP.	190
AHMAD, NUSRAT J	ST. LOUIS METROP.	190
AHMANN, THOMAS M	AUDRAIN	014
AHMED, NOOR	ST. LOUIS METROP.	190
AHUJA, SURAJ P	JACKSON	098
AILOR, EDGAR I	BOONE	026
AINSLIE, NINA K	JACKSON	098
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AJANS, ZAKI A	AUDRAIN	014
AKBARNIA, BEHROOZ A	ST. LOUIS METROP.	190
AKER, UMIT T	ST. LOUIS METROP.	190
AKHTER, JEANETTE E	BOONE	026
AKHTER, MOHAMMAD N	COLE	058
AKIN, C. D	JACKSON	098
AKS, DANL	JACKSON	098
AKYOL, SALIM	ST. LOUIS METROP.	190
AL-ALY, MOHAMMED	ST. LOUIS METROP.	190
AL-SHATHIR, SAAD M	JASPER	102
ALBANI, FRANK J	CLAY	050
ALBANO, BENJ I	JEFFERSON	106
ALBANO, MARIA C	JEFFERSON	106
ALBERA, VICTOR H	ST. LOUIS METROP.	190
ALBERG, MARVIN R	JACKSON	098
ALBERT, INGRID	ST. LOUIS METROP.	190
ALBUS, THOMAS E	ST. LOUIS METROP.	190
ALCANCIA, ELPIDIO Y	GREENE	082
ALDERMAN, DONALD P	JACKSON	098
ALDERMAN, THOS F	JACKSON	098
ALDRIDGE, JOHN	JACKSON	098
ALEGRE, JORGE M	ST. LOUIS METROP.	190
ALEKSANDER, BERNARDO G	ST. LOUIS METROP.	190
ALEX, MORRIS	ST. LOUIS METROP.	190
ALEXANDER, GEORGE K	ST. LOUIS METROP.	190
ALFIE, SALOMON	JACKSON	098
ALI, MOHAMMED E	JACKSON	098
ALLAIN, JAMES J	CLAY	050
ALLAN, JAMES E	COLE	058
ALLAN, JAMES R	CLAY	050
ALLBEE, ROGER H	JEFFERSON	106
ALLCORN, DONALD J	PETTIS	178
ALLEBACH, HOBART K	JACKSON	098
ALLEMAN, ROBERT E	JACKSON	098
ALLEN, ARTHUR A	JACKSON	098
ALLEN, BRENT T	ST. LOUIS METROP.	190
ALLEN, DAVID O	JASPER	102
ALLEN, HOLLIS N	ST. LOUIS METROP.	190
ALLEN, JAMES H	ST. LOUIS METROP.	190
ALLEN, JERRY H	F-G-W	074
ALLEN, JERRY H	GREENE	082
ALLEN, JOS E	BOONE	026
ALLEN, LOUIS A	CLAY	050
ALLEN, MELVIN A	ST. LOUIS METROP.	190
ALLEN, ROBERT W	BOONE	026
ALLEN, ROBT E	JACKSON	098
ALLEN, S. LLOYD	PLATTE	188
ALLEN, WILLARD M	ST. LOUIS METROP.	190
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ALLEN, WM C	BOONE	026
ALLISON, JAMES B	GREENE	082
ALMIRON, OSIAS A	ST. LOUIS METROP.	190
ALMQUIST, L A	JACKSON	098
ALONSO, J. MARIO	ST. LOUIS METROP.	190
ALONSO-YAGUE, PASCUAL	ST. LOUIS METROP.	190
ALSOP, WEBB S	JACKSON	098
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ALVIS, EDMUND B	ST. LOUIS METROP.	190
ALYEA, JAMES D	BOONE	026
AMADO-LEDO, DAVID E	ST. LOUIS METROP.	190
AMANAT, HABIBOLLAH	ST. LOUIS METROP.	190
AMES, MARY B	JACKSON	098
AMES, WM H	BUCHANAN	030
AMIN, NAVIN J	ST. LOUIS METROP.	190
AMINI, JAFAR	JACKSON	098
AMJAD, MOHAMMAD T	ST. LOUIS METROP.	190
AMMATELLI, FRANCIS J	JACKSON	098
AMOURY, RAYMOND A	JACKSON	098
AMPIL, FEDERICO L	GREENE	082
AMROMIN, GEORGE D	BOONE	026
ANCHETA, APOLINARIO A	GREENE	082
ANDERSON, CHARLES B	ST. LOUIS METROP.	190
ANDERSON, DOUGLAS A	GREENE	082
ANDERSON, IVAN A	BOONE	026
ANDERSON, JOHN M	ST. LOUIS METROP.	190
ANDERSON, PAUL B	OZARKS	166
ANDERSON, PHILIP C	BOONE	026
ANDERSON, RAYMOND B	JACKSON	098
ANDERSON, ROBERT	CLAY	050
ANDERSON, SUE K	JACKSON	098
ANDERSON, THOS R	BOONE	026
ANDERSON, WILLIAM A	JACKSON	098

ANOES, ELIZABETH A	JACKSON	098
ANDRES, EDWARD H	BUCHANAN	030
ANDREWS, BERNEIL W	CLAY	050
ANDRUS, BAILEY C	JACKSON	09B
ANDRUS, DON L	B-W-R-C	034
ANGLO, LUIS B	ST. LOUIS METROP.	190
ANSBACHER, LINDA E	BOONE	026
ANSLINGER, DAVID L	ST. LOUIS METROP.	190
ANSTEY, GEO C	ST. LOUIS METROP.	190
ANSTEY, JOHN T	ST. LOUIS METROP.	190
ANTHONY, DALLAS D	GREENE	0B2
ANTHONY, JAMES P	JACKSON	098
ANTONIOU, CHRIS A	ST. LOUIS METROP.	190
ANWAR, MOHAMMAO A	ST. LOUIS METROP.	190
APARICIO, SAMUEL E	BUCHANAN	030
APOSTOL, ANORES G	OZARKS	166
APPLEBERRY, CHAS H	MINERAL AREA	13B
AQUINO, TOMAS I	ST. LOUIS METROP.	190
ARBAB, ALI A	JACKSON	098
ARCELONA, JESUS A	ST. LOUIS METROP.	190
ARCHER, CAROL R	ST. LOUIS METROP.	190
ARENOS, PROCESO T	ST. LOUIS METROP.	190
ARIAS, FERNANOO	ST. LOUIS METROP.	190
ARMS, ARNOLO V	JACKSON	098
ARMS, RICHARO A	JACKSON	098
ARMSTRONG, JAY H	CLAY	050
ARMSTRONG, STEPHEN O	GREENE	082
ARNESON, AXEL N	ST. LOUIS METROP.	190
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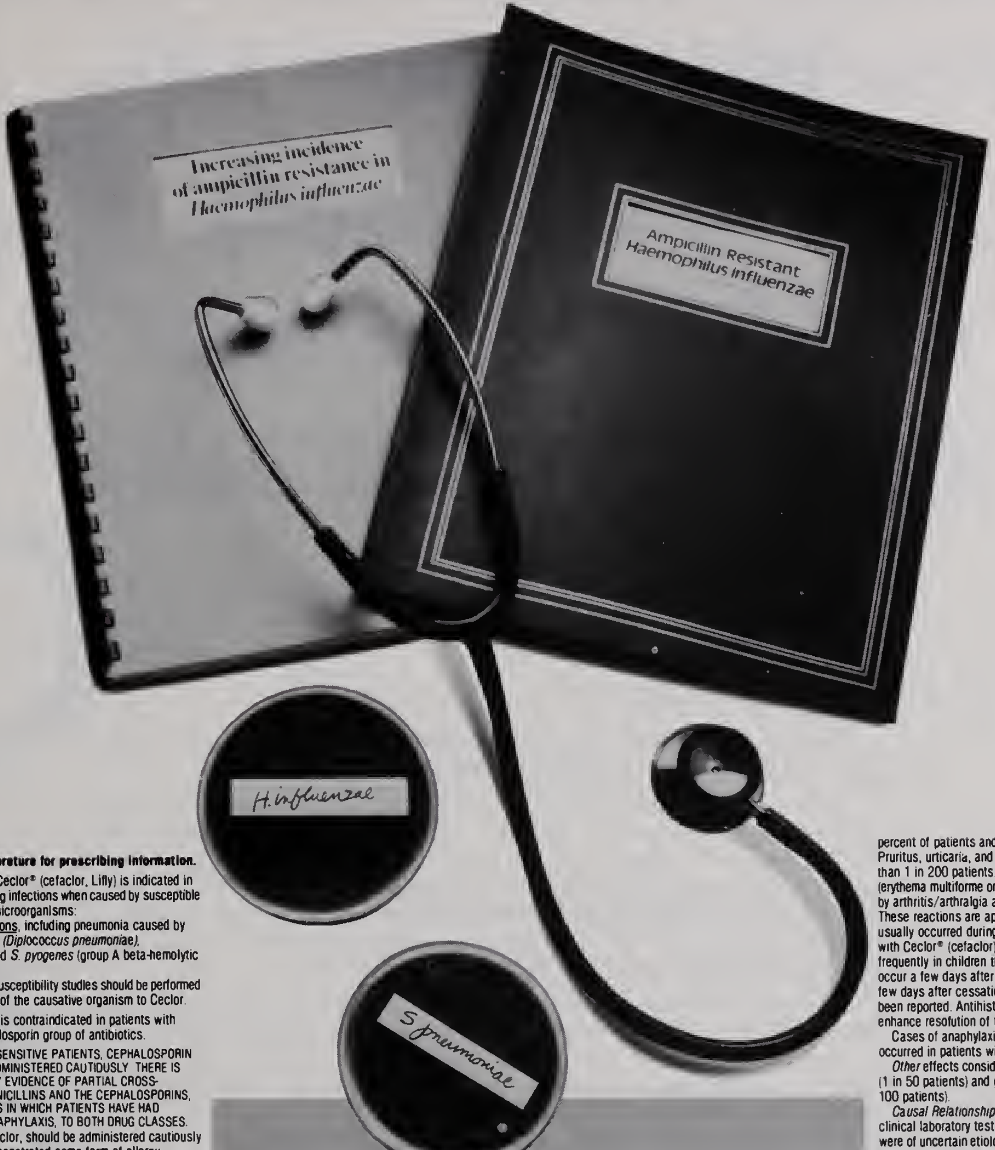
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.$^{1\text{-}6}$

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae* [8]

Note. Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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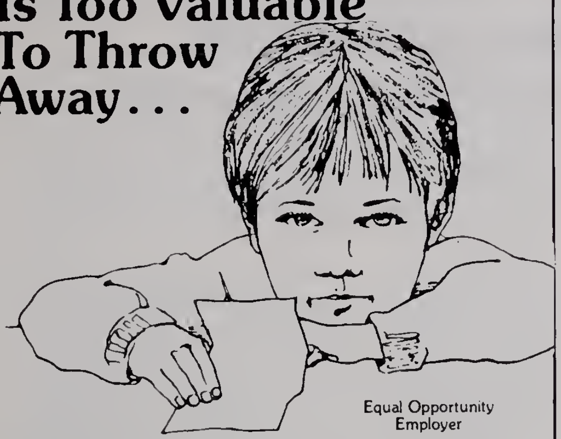

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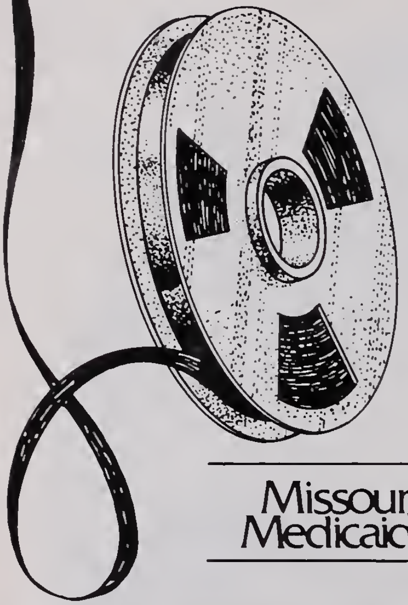

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UNIV. OF MO. MED CTR
COLUMBIA, MO 65201
314-882-4141

GIFFORD, DAVID L GE
7401 SOUTHERN DR.
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314-443-2511

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COLUMBIA, MO 65201
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STUDENT HEALTH
UNIV. OF MO.
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HAIBACH, HELMUT NM
H S TRUMAN MEMORIAL VA
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HAMDRY, BRUCE H IM
N406 MED. CTR.
COLUMBIA, MO 65212
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HATCHETT, JOHN W GS
M-580 UMMC
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407 MAPLEWOOD
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HEIMBURGER, RICHARD A PS
1504 EAST BROADWAY
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HELIKSON, MARY A PDS
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COLUMBIA, MO 65201
314-882-8157

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314-443-2511
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314-882-2511
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113 W BROADWAY
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314-443-8746
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1008 BOURN AVE
COLUMBIA, MO 65201
314-882-4976
IRVIN, WILLIAM S IM
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COLUMBIA, MO 65201
314-874-3340
JACKSON, ROBT L PO
39 & RAINBOW
K U MEDICAL CTR.
KANSAS CITY, KS 66103
JAMES, ELIZABETH J PD
UNIV MO MED CTR DEPT PO
COLUMBIA, MO 65201
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JAMES, RONALD C END
610 W BLVD SOUTH
COLUMBIA, MO 65201
314-443-2447
JENSEN, JACK E ORS
P.O. BOX D
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314-443-2402
JOHNSON, RICHARD E PTH
BOONE COUNTY HOSP
COLUMBIA, MO 65201
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JONES, ROBERT S P
803 STADIUM RD
COLUMBIA, MO 65201
314-449-2511
JOSEPH, DONALD J OTO
UNIV MO SCH OF MED
COLUMBIA, MO 65201
314-882-8173
KANG, EUGENE HONG J R
N207 HEALTH SCIENCES CTR.
807 STADIUM RD.
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314-882-1161
KAPLAN, MICHAEL F PS
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COLUMBIA, MO 65201
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KAYS, KENNETH M R
4 DARWOOD PLACE
CHRISTMAN LANE
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KENNETT, JERRY D IM
401 KEENE ST.
COLUMBIA, MO 65201
314-874-3330
KEOWN, KENNETH K AN
UNIV OF MO SHCOOL MED
COLUMBIA, MO 65201
314-882-2921
KING, ROBERT J U
3401 BERRYWOOD DR.
COLUMBIA, MO 65201
314-449-6260
KLACHKO, DAVID M IM
DEPT MED
M712MED SCI
COLUMBIA, MO 65201
314-882-2273
KNIGHT, FRANK H R
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COLUMBIA, MO 65212
314-882-1161
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COLUMBIA, MO 65201
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LACHANCE, LEOPOLD FP
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COLUMBIA, MO 65201
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LEECH, CHAS A GP
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N217 RADIOLOGY MED CTR.
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LOBECK, CHARLES C PO
RR 4
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LOEPPKY, CAROL B IM
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LOGUE, JOHN T IM
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MAHONEY, JOHN P PTH
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MITCHELL, LYNN D IM
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MUSCATO, MARY S HEM
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NAVARRO, MANUEL I R
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NICHOLS, WALTER K GS
UN OF MO MED CTR DPT GS
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NIEUWENHUIZEN, MAARTEN P
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NOLPH, GEORGIA J GP
908 HICKORY HILL DR.
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NOLPH, KARL D IM
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COLUMBIA, MO 65201
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OSKINS, PERRY B PATHOLOGY OEPT UMMC COLUMBIA, MO 65201 314-882-1121	PTH
OVERHOLSER, MILTON O 807 STAOIUM ROAD COLUMBIA, MO 65201	OS
OXENHANOLER, RONALO W M-646 MEOICAL SCIENCE B COLUMBIA, MO 65201 314-882-1121	PTH
PARKER, BRENT M OIRECTORS OFFICE 807 STAOIUM COLUMBIA, MO 65201 314-882-4911	CO
PARRAGA, HUMBERTO C 107 WILD ROSE LANE ROCHESTER, IL 62563	CHP
PATTERSON, OONALD C 3401 BERRYWOOO COLUMBIA, MO 65201 314-449-3884	OBG
PAYNE, OAVIO E 1901 RIOGEMONT COLUMBIA, MO 65201 314-874-3300	O
PAYNE, JOHN W 3205 LANSING AVE COLUMBIA, MO 65201 314-443-2402	ORS
PEARLMAN, MILTON H UNIV. OF MO., MEO. CTR. COLUMBIA, MO 65201 314-882-4141	OTO
PEREZ-MESA, CARLOS M ELLIS FISCHEL CANCER HO COLUMBIA, MO 65201 314-882-1121	PTH
PERRY, MICHAEL C 807 STADIUM RO COLUMBIA, MO 65201 314-882-6123	IM
PETERSON, CHAS R RUSK REHAB CENTER COLUMBIA, MO 65212	PM
PFEFER, LELANO U 1504 E BROAOWAY COLUMBIA, MO 65201 314-449-1261	IM
PICKARO, CLARENCE M 113 W BROAOWAY COLUMBIA, MO 65201 314-449-4101	IM
PICKENS, JAMES M UNIV OF MO MED CTR COLUMBIA, MO 65201 314-882-6991	PO
PINGELTON, WM B 113 W 8ROADWAY COLUMBIA, MO 65201 314-449-5766	OBG
POLITTE, LENARO L 401 KEENE ST COLUMBIA, MO 65201 314-874-3330	CO
PRICA, JR., GEORGE 1502 E. BROAOWAY COLUMBIA, MO 65201 314-449-0808	FP
PUCKETT, CHAS L UNIV OF MO MED CTR M348 MED CTR 807 STA COLUMBIA, MO 65201 314-882-2275	PS
RALL, KENNETH L 1121 DANFORTH DRIVE COLUMBIA, MO 65201 314-443-4591	R
REINISCH, JOHN F UNIV. OF MO. MED. CTR. COLUMBIA, MO 65201 314-882-2275	PS
RENNER, GREGORY J M583 UNIV. MED. CTR. COLUMBIA, MO 65201 314-882-8173	OTO
REYNOLDS, JAMES O 807 STADIUM COLUMBIA, MO 65201 314-874-3340	IM
RIDENHOUR, CLARENCE E ROUTE 13 CEDAR GROVE COLUM8IA, MO 65201 314-874-3111	GS
RIKLI, ARTHUR E 4003 FAUROT DR COLUMBIA, MO 65201 314-882-2248	GPM
RINGENBERG, Q. SCOTT 807 STADIUM RD. COLUMBIA, MO 65212 314-882-4141	IM
RODGERS, ELRIE P BOX 993 COLUMBIA, MO 65201 314-442-0914	IM
ROGERS, WALLACE A UNIV MO MEO CTR OPT PTH COLUMBIA, MO 65201 314-882-1121	PTH
ROLLER, JAMES A 3401 BERRYWOOO COLUMBIA, MO 65201 314-221-4786	O
ROSENHOLTZ, MITCHELL J 103 LONGFELLOW LANE COLUMBIA, MO 65201 314-882-1121	PTH
ROSS, GILBERT 807 STAOUIM COLUMBIA, MO 65201 314-882-3966	U
ROYER, JERRY A 807 STAOIUM COLUMBIA, MO 65201 314-882-6191	FP
RUSSELL, GARTH S BOX O COLUMBIA, MO 65201 314-443-2402	ORS
SAOHU, VIJAY K 1502 E. BROAOWAY COLUMBIA, MO 65201 314-443-4591	R
SALMON, TIMOTHY P 215 BREWER OR. COLUMBIA, MO 65201 314-882-3141	O
SANOER, PAUL O W350 OEPT. ANES 807 STADIUM RO. COLUMBIA, MO 65201	AN
SANOERS, HAROLO L 1502 E BROADWAY COLUMBIA, MO 65201	OR
SCHEWE, ELMER J 3401 BERRYWOOO SUITE104 COLUMBIA, MO 65201 314-443-8773	GS
SCHNURPFEIL, DONALO E 2208 BUSHNELL APT. E COLUMBIA, MO 65201 314-882-6191	FP
SCHOENGARTH, LOWELL O 3205 LANSING AVE. COLUMBIA, MO 65201 314-449-3846	OPH
SEE, WM B 706 SEYMOUR COLUMBIA, MO 65201 445-4561	OBG
SHAHEEN, ELEANOR UNIV MO MEO CTR-PEO DPT COLUMBIA, MO 65201 314-882-4932	PD
SHAPERO, JAMES A 1301 FIELOCREST COLUMBIA, MO 65201 314-883-8771	P
SHERMAN, OAVIO OEPT OF NEUROLOGY UNIV OF MO MEO CTR COLUMBIA, MO 65201 314-882-3133	N
SIGHTS, WARREN P 807 STAOIUM COLUMBIA, MO 65201	NS
SILVER, DONALO 807 STADIUM COLUMBIA, MO 65201 314-882-8178	GS
SIMONDS, JOHN F 807 STAOIUM COLUMBIA, MO 65201 314-882-8006	CHP
SINGSEN, BERNHARD H M661 UNIV. OF MO. MED. CTR. COLUMBIA, MO 65212 314-882-3996	PD
SMITH, JASON N 701 WEST BLVD S COLUMBIA, MO 65201 314-882-2580	IM
SMITH, JOE R 1504 E BROADWAY COLUM8IA, MO 65201 314-449-5887	OPH
SOHA, JOSEPH J 114 ARBOR DRIVE COLUMBIA, MO 65201 314-449-3931	DR
SOMERS, JOHN E 11 S WILLIAMS ST COLUMBIA, MO 65201 314-449-3404	N
SORKIN, MICHAEL I TD 4-E 226 UNIVERSITY OF MO MED COLUMBIA, MO 65201 314-882-2212	IM
SOSEBEE, LEE A 3205 LANSING AVE COLUM8IA, MO 65201 314-443-2402	ORS
SPURGEON, MILO J 404 EOGEWOOO COLUMBIA, MO 65201	AN
STEPHENSON, HUGH E UMIV OF MO SCHOOL MEO COLUMBIA, MO 65201 314-882-7155	TS
STEWART, WELLINGTON 8 COL OF MEO OEPT PATH COLUMBIA, MO 65201 314-882-1121	PTH
STOY, ROBT P 201 W BROAOWAY COLUMBIA, MO 65201 314-449-3159	GS
STRAOFORO, H T 1444 S EL CHAPARRAL AVE COLUMBIA, MO 65201	ORS
STRAUSBAUGH, LARRY J 807 STAOIUM RD. COLUMBIA, MO 65201 314-442-4902	IM
SUNDERRAJAN, ETTAYAPURAM V VA HOSPITAL ROOM 408 COLUMBIA, MO 65201 314-443-2511	PUO
TAYLOR, HENRY M UNIV OF MO MEO CTR COLUMBIA, MO 65201 314-882-1121	IM
TEMPLER, JERRY W 807 STADIUM COLUMBIA, MO 65201 314-882-8173	OTO
TERRY, BOYO E UNIV OF MO HOSP OEPT SU COLUMBIA, MO 65201 314-882-7156	GS
THOMAS, HORACE E 1502 E BROAOWAY COLUMBIA, MO 65201 314-449-6406	GS
THOMAS, JAMES R 3205 LANSING COLUMBIA, MO 65201 314-882-8173	OTO
THOMAS, ROBERT M 3205 LANSING AVE AT KEE COLUMBIA, MO 65201 314-449-0516	OTO
TILLMAN, CRAIG P 2901 W ROLLINS COLUMBIA, MO 65201 314-882-1161	OR
TINSLEY, JOHN C 16 S 10TH ST COLUMBIA, MO 65201 314-442-6838	IM
TRUMBOWER, WM D 2417 BEACHVIEW COLUMBIA, MO 65201 314-443-0049	OBG
TULLY, RICHARO J 807 STAOIUM RO COLUM8IA, MO 65201 314-882-1161	OR
VAN STONE, JOHN C TO 4-E UNIV OF MO MEO CTR COLUMBIA, MO 65201 816-443-1531	IM
VISOT, LUIS R RUSK REHAB. CTR. COLUM8IA, MO 65201 314-882-3101	PM
VU, LIEM C UNIV. OF MO. MED. CTR. DEPT. OF PATH. COLUMBIA, MO 65201 314-882-1121	PTH
WAGGONER, CHAS M 201 W BROADWAY COLUMBIA, MO 65201 314-443-7430	R
WAKERLIN, GEO E 231 EL BONITO WAY MILLBRAE, CA 94030	US
WALLS, JOSEPH T UNIV. OF MO. MED. CTR. COLUMBIA, MO 65201 314-882-6954	CDS
WALTERS, LAURA 1027 HICKORY HILL DR. COLUMBIA, MO 65201 314-449-1266	D
WATSON, TREVOR F 1504 E BROADWAY COLUMBIA, MO 65201 314-443-4511	OBG
WATTS, CLARK C 807 STADIUM COLUMBIA, MO 65201 314-882-4908	NS
WEIGEL, JAMES W STUDENT HEALTH 6TH STREET COLUMBIA, MO 65201 314-882-7481	GP

WEINSTEIN, MARY M	UMMC DEPT. CHILD HEALTH COLUMBIA, MO 65201 314-882-4932	PO
WEINSTEIN, STEPHEN H	DEPT. OF SURGERY UNIV. OF MO. MED CTR. COLUMBIA, MO 65212 314-882-3966	U
WEISS, JAMES M	UNIV OF MO MED CENTER COLUMBIA, MO 65201 314-882-3176	P
WHITENER, DON R	401 KEENE ST. COLUMBIA, MO 65201 314-874-3340	IM
WHITTIER, FREDERICK C	RR #5 COUNTRYSHIRE ESTATES COLUMBIA, MO 65201 314-882-3181	IM
WIGGINS, ROLAND L	408 N GARTH ST COLUMBIA, MO 65201 314-449-4958	IM
WILLCOX, ROGER A	2607 MALLARD CT. COLUMBIA, MO 65201 314-875-4545	EM
WILLIAMS, ANDREW F	203 W BROADWAY COLUMBIA, MO 65201 314-443-8796	OBG
WILSON, GEO P	SUITE 103 3401 BERRYWOOD COLUMBIA, MO 65201 314-449-3931	R
WILSON, JOHN E	401 KEENE ST COLUMBIA, MO 65201 314-874-2020	OBG
WINDMILLER, MYRL E	1504 E BROADWAY COLUMBIA, MO 65201 314-449-5684	GS
WINNACKER, JOHN L	467 VA HOSPITAL COLUMBIA, MO 65201 314-443-2511	IM
WOODRUFF, CALVIN W	807 STADIUM ROAD COLUMBIA, MO 65201 314-882-3996	PO
YANG, HENRY K	203 W. BROADWAY COLUMBIA, MO 65201 314-874-1616	OPH
YARBRO, JOHN W	2604 LUAN COURT COLUMBIA, MO 65201 314-882-6163	IM
YESUS, YOHANNES W	807 STADIUM RD COLUMBIA, MO 65201 314-882-1121	PTH

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AHAD, ABDUL	BOX 263 3400 FREDERICK ST JOSEPH, MO 64502 816-232-8431	P
AMES, WM H	902 EDMOND ST ST JOSEPH, MO 64501 816-233-9711	IM
ANDRES, EDWARD H	1322 N. 36TH ST. ST JOSEPH, MO 64506 816-233-3337	GS
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BALLARO, DEWEY P	THOMPSON BRUMM KNEPPER ST JOSEPH, MO 64502 816-233-9711	IM
BARTULICA, NICHOLAS	3400 FREDERICK ST JOSEPH, MO 64502 816-232-8431	P
BECK, PAUL M	409 KIRKPATRICK BLDG ST JOSEPH, MO 64501 816-233-2297	OPH
BEHELER, EDWARD M	422 N 7TH ST ST JOSEPH, MO 64501 816-232-8444	GS
BENSON, SCOTT C	P O BOX #1387 MESA, AZ 85201	FP
BERKOWITZ, ELLIS R	510 FRANCIS ST. ST. JOSEPH, MO 64501	IM
BERNEY, FRANCIS J	1225 N 10TH ST ST JOSEPH, MO 64501 816-232-3771	OTO
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CHILLICOTHE, MO 64601
CONRAD, JOS A GP
511 ELM ST
CHILLICOTHE, MO 64601
CROSS, ALBERT D GP
618 E FIRST ST
TRENTON, MO 64683
DALEY, FRANK R GP
HAMILTON, MO 64644
DIXON, JOHN R GS
125 E LOCKLING ST
BROOKFIELD, MO 64628
DUFFY, OLIVER F US
902 CUSTER
TRENTON, MO 64683
ELLSWORTH, WILLARD GP
CAINSVILLE, MO 64632
FAIR, WM L FP
910 CLAY ST
CHILLICOTHE, MO 64601
GALE, JOS F GP
103 11TH ST
CHILLICOTHE, MO 64601
GALVEZ, SISENANDO P IM
105 S KANSAS
MARCELINE, MO 64658
GARY, GEO GP
121 N KANSAS
MARCELINE, MO 64658
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P.O. BOX 449
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GILLILAND, CHAS E PTH
817 W 4TH ST
CAMERON, MO 64429
HOWELL, BILLY D GP
P O BOX 367
BROOKFIELD, MO 64628
LEVENE, ROBERT B IM
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MANDLER, GEO OTO
C/O HEDRICK OFFICE BLDG. #9
103 ELEVENTH ST.
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646-2847
MOU, BIN P
P.O. BOX 151
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425-6404
NIXON, EDWARD E GP
GALLATIN, MO 64640
PARK, YOUNG E PTH
2534 W. 29TH ST.
JOPLIN, MO 64801
PLATZ, JOHN H GP
16 N MONROE ST
CARROLLTON, MO 64633
QUINN, KENT S R
187 36TH AVE. N.W.
ROCHESTER, MN 55901
RIVERA, MINERVA M IM
308 N. MAIN ST.
BROOKFIELD, MO 64628
258-3324
RIVERA, PEPITO C GS
308 NO. MAIN
BROOKFIELD, MO 64628
ROSE, JOHN F R
2105 MEADOW LANE CIRCLE
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RYAN, DAVID FP
618 E. FIRST ST.
TRENTON, MO 64683
SMITH, ROBT W GP
BROOKFIELD PLAZA
BROOKFIELD, MO 64628
STATON, R H GP
215 S MAIN ST
CARROLLTON, MO 64633
SZYMANSKI, STANLEY R R
329 N ROLLINS ST
MACON, MO 63552
TRINIDAD, HERMANITO R GS
103 - 11TH ST., SUITE 8
CHILLICOTHE, MO 64601
WILSON, FRED K GP
WINSTON, MO 64689
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YOUSSEF, REDWAN OPH
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ALLISON, JAMES B P
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AMPIL, FEDERICO L TR
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ANCHETA, APOLINARIO A GS
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ANDERSON, DOUGLAS A PTH
1235 EAST CHEROKEE
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ANTHONY, DALLAS D R
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ASH, CHARLES J ORS
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SPRINGFIELD, MO 65802
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ATKINSON, THOS E OPH
1900 S NATIONAL NO 1400
SPRINGFIELD, MO 65804
417-753-2930
AUNER, CECIL R IM
COX MEDICAL TOWER SUITE 805
1443 NORTH ROBBERSON
SPRINGFIELD, MO 65802
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BACK, DONALD K IM
1211 S GLENSTONE
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417-831-9820
BAGBY, JACK M JR IM
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BAILEY, ALAN H PUD
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221 PROFESSIONAL BLD
SPRINGFIELD, MO 65806
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BALDWIN, RICHARD M OBG
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1443 N. ROBBERSON
SPRINGFIELD, MO 65802
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BARNHILL, FLOYD R OTO
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SUITE 2300
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417-887-5750
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208 MEDICAL TOWER
SPRINGFIELD, MO 65802
417-865-5521
BARTLEY, RICHARD L FP
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SUITE 1950
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417-882-1900
BENNOCH, SHANE L PD
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1423 N JEFFERSON
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BENSON, RONALD G OBG
404 E BATTLEFIELD
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417-887-0966
BENTLEY, JOHN D IM
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SUITE 2200
SPRINGFIELD, MO 65804
417-887-4000
BERRY, PAUL T FP
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BOLES, DAVID GS
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417-831-1511
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1333 S. FAIRWAY TERR.
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2830 E. GLENWODD ST.
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609 E. CHERRY
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FARTHING, GENE W GS
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SPRINGFIELO, MO 65804
417-881-5555

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609 CHERRY
304 PROFESSIONAL BLDG
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204 MEDICAL TOWER
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FITE, JAMES E EM
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2301 HDLMES
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24TH & GILLHAM RD
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816-234-3575
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KANSAS CITY, MO 64108
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ANDERSON, SUE K NEP
629 W. 70TH
KANSAS CITY, MO 64113
816-361-3888
ANDERSDN, WILLIAM A PD
CHILDRENS MERCY HOSP.
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KANSAS CITY, MO 64108
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ANDES, ELIZABETH A IM
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INDEPENDENCE, MO 64055
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ARRIBAS, AURDRA I GP
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BRUMM, LAWRENCE W FP
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14909 LITTLE BLUE RD
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BRUNTON, STEPHEN A FP
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17221 E 23RO ST.
INOEPENDENCE, MO 64057
314-373-4646
LAIBEN, GREGG R IM
309 HIGHLAND LANE
BLUE SPRINGS, MO 64015
816-229-3314
LAKEY, LINOA S IM
4333 MAOISON #202
KANSAS CITY, MO 64111
816-531-4559
LAL, ROOP IM
2624 W 77TH ST.
PRAIRIE VILLAGE, KS 66208
913-381-7062
LALLY, JAMES J GS
4620 NICHOLS PKWY
KANSAS CITY, MO 64112
816-931-6190
LAMBERT, LAURA M GP
1039 PARKWOOO OR
ORMONO BEACH, FL 32074
LAMBIE, ROOGER W R
900 HIGHLANO PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131
816-333-8420
LANOERS, BURNELL GE
6400 PROSPECT SUITE 300
KANSAS CITY, MO 64132
816-333-1821
LANOIS, GEO K IM
1102 GRANO AVE
KANSAS CITY, MO 64106
816-474-6690
LANGLEY, HARRIET S IM
5900 STATE LINE RO
SHAWNEE MISSION, KS 66208
913-362-7234
LAPI, ANGELO PTH
2012 STRATFORO RO
SHAWNEE MISSION, KS 66208
913-362-4127
LAPP, HARRY C GS
612 SHAMROCK
211 VILLA I
LEE'S SUMMIT, MO 64063
816-524-7378
LARSEN, WM E IM
2929 8ALTIMORE
KANSAS CITY, MO 64108
816-756-0695
LATHAM, RAYMONO W PO
206 BROADWAY MEO. BUILOING
4400 8ROAOWAY
KANSAS CITY, MO 64111
816-561-8100
LAUER, OANL J IM
236 MEOICAL PLAZA
4320 WORNALL RO
KANSAS CITY, MO 64111
816-531-2020
LAYLE, JOHN K IM
4320 WORNALL
KANSAS CITY, MO 64111
816-531-0930
LAYTON, IRA C IM
6420 PROSPECT
SUITE T101
KANSAS CITY, MO 64132
816-363-4100
LEE, GERALO 8 CO
101 MERMORIAL OR
KANSAS CITY, MO 64108
816-753-0155
LEE, HENRY A R
6700 TROOST
352 ROCKHILL MEO BLO
KANSAS CITY, MO 64131
816-363-5606
LEE, KING Y OPH
6700 TROOST AVE
KANSAS CITY, MO 64131
816-333-7376
LEE, LAWRENCE E TR
SUITE 340
2928 BALTIMORE
KANSAS CITY, MO 64108
816-756-1050
LEE, TAE H NEP
300 THE CITAOEL
1743 E. 63RO ST.
KANSAS CITY, MO 64110
816-444-2098
LEES, JOYCE M EM
TRINITY LUTHERAN HOSP
31ST & WYANDOTTE ST
KANSAS CITY, MO 64108
816-753-4600
LEESE, PHILIP T EM
6120 LAMAR AVE.
SHAWNEE MISSION, KS 66202
913-722-3779
LEGAROA, MARIA M N
STE 400 HIGHLANOS PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131
816-444-4082
LEHNER, RICHARO L CO
12425 434TH AVE. SE
NORTH BENO, WA 98045
LEIBSOHN, JOEL M OPH
1515 W TRUMAN RO
SUITE 505
INOEPENOENCE, MO 64050
816-836-8166
LEIFER, WM W U
703 HIGHLANOS PROF TOWE
6724 TROOST
KANSAS CITY, MO 64131
816-333-0500
LENTZ, CLARK H OM
2600 W. 69TH ST.
SHAWNEE MISSION, KS 66208
913-362-7515
LENTZ, HAROLO C U
1515 W. TRUMAN RO.
SUITE 404
KANSAS CITY, MO 64050
816-836-8831
LERNER, BRUCE AN
17421 MEOICAL CENTER PARKWAY
INDEPENOENCE, MO 64057
LETIZIA, WAYNE L IM
1515 W. TRUMAN RO.
INOEPENOENCE, MO 64050
816-833-4466
LEVEY, HARRY B OBG
310 HIGHLANDS PROFESSIO
6724 TROOST
KANSAS CITY, MO 64131
816-333-3305
LEVI, BERNARO IM
4949 ROCKHILL RO.
KANSAS CITY, MO 64110
314-276-8259

LEWIS, FRANK H IM
1515 W. TRUMAN RD.
SUITE 403
INDEPENDENCE, MO 64050
816-836-1616
LEWIS, REVIS C NS
PENN PARK MED BLDG STE
2929 BALTIMORE
KANSAS CITY, MO 64108
816-561-8288
LEWITTON, SOLOMON GS
410 HIGHLAND PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131
816-333-9500
LIANG, JING C GS
17221 E 23RD
INDEPENDENCE, MO 64057
816-373-4646
LICHTOR, JOS M ORS
6724 TROOST SUITE 409
KANSAS CITY, MO 64131
816-363-5442
LINDGREN, CARLETON J P
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
816-358-6262
LINDQUIST, CARL N OM
RT 4 BOX 150
REEDS SPRING, MO 65737
LINK, VANCE E FP
SUITE 302
1515 W. TRUMAN RD.
INDEPENDENCE, MO 64050
816-836-8200
LINVILLE, HOWARD E GS
6700 TROOST AV STE 444
KANSAS CITY, MO 64131
816-333-2424
LITTON, NANCY J PTH
SUITE 206
1600 WEST HIGHWAY 40
BLUE SPRINGS, MO 64015
816-229-7943
LIU, BEN C OBG
310 HIGHLANDS PROFESSIO
6724 TROOST
KANSAS CITY, MO 64131
816-333-3305
LIU, JOHNS N R
6724 TROOST SUITE 900
KANSAS CITY, MO 64131
816-333-8420
LOCKWOOD, GARY F OBG
4320 WORNALL RD STE 520
KANSAS CITY, MO 64111
816-531-9400
LOCKWOOD, TED E PS
4400 BROADWAY
KANSAS CITY, MO 64111
816-561-6633
LOFTUS, LORETTA S IM
4320 WORNALL RD. SUITE 530
KANSAS CITY, MO 64111
816-753-4312
LOHRENTZ, LOIS H AN
2800 W 50TH TERRACE
SHAWNEE MISSION, KS 66205
913-333-7484
LONG, R S FP
6601 ROCKHILL ROAD
KANSAS CITY, MO 64131
816-361-7333
LOPEZ-PLATA, ROBERTO GS
751 E. 63RD ST.
SUITE 378
KANSAS CITY, MO 64110
816-333-6750
LORD, JAMES L FP
1515 W TRUMAN ROAD
SUITE 504
INDEPENDENCE, MO 64050
816-254-6666
LOREN, MICHAEL L POA
7621 CANTERBURY
SHAWNEE MISSION, KS 66208
913-341-6894
LORENZO, EDILBERTO B CHP
1820 W 91ST PLACE
KANSAS CITY, MO 64114
816-361-7476
LORENZO-MEDINA, REMEDIOS IM
509 W 119TH TERR
KANSAS CITY, MO 64145
816-942-7921
LOTUACO, GAMALIEL G PS
621 W. 50TH ST.
KANSAS CITY, MO 64112
LOUTZENHISER, JAMES K P
1010 CARONDELET DR.
SUITE 424
KANSAS CITY, MO 64114
816-942-8445
LUETJE, CHARLES M OTO
105 PENN PARK
2928 MAIN
KANSAS CITY, MO 64108
816-561-4423
LYDDON, HAROLD R FP
1221 W. 67TH ST.
KANSAS CITY, MO 64113
813-444-0274
MABEN, SAM E IM
9406 E 63RD
KANSAS CITY, MO 64133
816-356-1060
MAC DONALD, ROBIN R DR
352 ROCKHILL MED. BLDG.
6700 TROOST
KANSAS CITY, MO 64131
816-363-5606
MAC GEE, EDWIN E NS
4440 BROADWAY
KANSAS CITY, MO 64111
816-561-4655
MAC INNIS, FLORENCE E PUD
OUR LADY OF MERCY
918 E. 9TH ST.
KANSAS CITY, MO 64106
816-842-6518
MAC NAUGHTON, RALPH E DR
CARONDELET RADIOLOGY IN
1010 CARONDELET DR R
KANSAS CITY, MO 64114
816-942-6900
MAC NAUGHTON, ROBT A R
CARONDELET RADIOLOGY IN
1010 CARONDELET DR R
KANSAS CITY, MO 64114
816-942-6900
MAHMOUD, SAID F PUD
12701 EATON CIRCLE
SHAWNEE MISSION, KS 66209
913-648-0248
MAIS, THOMAS E R
12864 SAGAMORE RD.
SHAWNEE MISSION, KS 66209
913-341-2791
MALLOUK, ALEXANDER G IM
4320 WORNALL RD STE 514
KANSAS CITY, MO 64111
816-931-6712
MALLOW, JAMES E AN
2401 WEST 93RD ST.
SHAWNEE MISSION, KS 66206
913-381-1235
MANGUM, WILLIAM B OTO
434 BLUE RIDGE TOWER
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
816-358-7177
MANION, THOS S U
1515 TRUMAN RD
INDEPENDENCE, MO 64050
816-252-1900
MANUEL, LOUIS C OPH
1734 E 63RD ST
KANSAS CITY, MO 64110
816-363-4700
MARKS, MARK M CRS
6537 SUMMIT ST
KANSAS CITY, MO 64113
816-523-6699
MARSH, ALICE PD
PLEASANT HILL, MO 64080
MARSHALL, CAMERON F OBG
C/O CAROL MARSHALL
1107 TOPEKA ST.
EMPORIA, KS 66801
MARSHALL, HAL E PTH
4949 ROCKHILL RD
KANSAS CITY, MO 64110
816-276-8262
MARTIN, CATALINO V AN
101 MEMORIAL DR
ST MARYS HOSPITAL
KANSAS CITY, MO 64108
816-753-5700
MARTIN, CLYDE V P
321 RED BRIDGE PROF BLDG.
400 E. RED BRIDGE RD.
KANSAS CITY, MO 64131
816-941-0099
MARTIN, MARK W FP
225 W. DOUGLAS
LEE'S SUMMIT, MO 64063
816-524-2626
MASON, WAYNE E R
6700 TROOST STE 352
KANSAS CITY, MO 64131
816-363-5606
MASSARAT, PARVIZ R
TRUMAN MED CTR DEPT OF RAD.
2301 HOLMES ST.
KANSAS CITY, MO 64108
816-556-3273
MASUCCI, JOS M FP
600 ARGYLE BLDG
306 EAST 12 ST
KANSAS CITY, MO 64106
816-221-8848
MATOVICH, VIOLET B N
UNIV. OF MO. K. C.
2411 HOLMES
KANSAS CITY, MO 64108
816-474-4100
MATTA, CAMILLE S OPH
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
816-358-3600
MAYER, JOHN H TS
503 PLAZA PKWY BLDG
4620 J C NICHOLS PKW
KANSAS CITY, MO 64112
816-561-6510
MC BRIDE, NANCY M OBG
4400 BROADWAY
SUITE 302
KANSAS CITY, MO 64111
816-753-2223
MC CALLISTER, BEN D CO
4320 WORNALL RD
KANSAS CITY, MO 64111
816-931-1884
MC CANSE, ANDREW GS
4320 WORNALL RD STE 332
KANSAS CITY, MO 64111
816-753-0718
MC CLANAHAN, ROBT C IM
1200 BRYANT BLDG.
1102 GRAND AVE.
KANSAS CITY, MO 64106
816-471-2892
MC CONAHAY, DAVID R CD
4320 WORNALL ROAD
KANSAS CITY, MO 64111
816-931-1883
MC CONCHIE, JAMES E R
1515 TRUMAN RD.
INDEPENDENCE, MO 64050
816-252-8800
MC COY, FREDERICK J PS
4177 BROADWAY
KANSAS CITY, MO 64111
816-561-1414
MC CRAY, GLEN M CHP
24TH & GILLHAM RDS
KANSAS CITY, MO 64108
816-234-3213
MC CULLOUGH, CAMPBELL C JR. ORS
P.O. BOX 78
OAK GROVE, MO 64075
MC DONALD, HERBERT L TS
1010 CARONDELET DR.
SUITE 301
KANSAS CITY, MO 64114
816-942-0007
MC DONNELL, JOHN F IM
4320 WORNALL RD
KANSAS CITY, MO 64111
816-753-3243
MC ELROY, CARLA N EM
ST MARYS HOSPITAL EMERG
DEPT - 101 MEMORIAL
KANSAS CITY, MO 64108
816-753-5700
MC FARLAND, H R N
4320 WORNALL
KANSAS CITY, MO 64111
MC FARLAND, M D IM
4320 WORNALL RD
KANSAS CITY, MO 64111
816-561-1533
MC GANNON, PAUL T GS
6420 PROSPECT
SUITE T203
KANSAS CITY, MO 64132
816-333-0114
MC GUIRE, THOS H OBG
SUITE T-307
6420 PROSPECT
KANSAS CITY, MO 64132
816-361-7807
MC INTOSH, DONALD E AN
6400 PROSPECT
KANSAS CITY, MO 64132
816-444-1139
MC INTOSH, MICHELE C PO
11200 WINNE RD
INDEPENDENCE, MO 64052
816-836-4300
MC INTYRE, JOHN D AN
4948 WESTWOOD RD
KANSAS CITY, MO 64112
816-753-2185
MC KEE, FRANK E OPH
11201 COLORADO
KANSAS CITY, MO 64137
816-761-6722
MC KEE, WALLACE P IM
4320 WORNALL RD
KANSAS CITY, MO 64111
816-931-1166
MC KEEL, THOS B IM
615 HIGHLAND PROF
6724 TROOST
KANSAS CITY, MO 64131
816-444-9348
MC KNELLY, WM V P
39TH & RAINBOW BLVD
KANSAS CITY, KS 66103
816-588-6493
MC LAUGHLIN, DURNELL OPH
1734 EAST 63RD ST
SUITE 502
KANSAS CITY, MO 64110
816-361-1515

MC LEMORE, WILLIE O IM
UMKC SCHOOL OF MEDICINE
2411 HOLMES
KANSAS CITY, MO 64108
816-474-4100
MC NABNEY, W K TRS
TRUMAN MEDICAL CTR
2301 HOLMES
KANSAS CITY, MO 64108
816-556-3127
MC NUTT, THEODORE L GP
6901 W. 101 ST.
SHAWNEE MISSION, KS 66212
913-649-6627
MC SHANE, MAUREEN IM
APT 31 4620 SUMMIT
KANSAS CITY, MO 64112
816-531-4559
MEDLEY, BENJAMIN E DR
1010 CARONDELET DR
SUITE 114
KANSAS CITY, MO 64114
816-942-6900
MEDLICOTT, WILLIAM J ORS
4320 WORNALL RD
KANSAS CITY, MO 64111
816-753-5102
MEEGAN, ROBT J R
340 PENN PARK MED. CTR.
2928 BALTIMORE
KANSAS CITY, MO 64108
816-756-1050
MEHTA, SATISH K IM
751 E. 63RD ST.
SUITE 378
KANSAS CITY, MO 64110
816-333-6750
MEHTAA, URMILA J AN
WAYNE MINER HEALTH CTR.
825 UCLID AVE.
KANSAS CITY, MO 64124
MEIKLEJOHN, DUNCAN C OBG
2116 S STERLING
INDEPENDENCE, MO 64052
816-836-8600
MELGAARD, SVEN R AN
12887 CAMBRIDGE CIRCLE
LEAWOOD, KS 66209
913-642-0545
MELIA, B J JR D
216 CARONDELET MEDICAL BLDG.
1010 CARONDELET DR.
KANSAS CITY, MO 64114
816-942-4336
MENDOZA, MARLENE A P
WESTERN MO MENTAL HEALTH CTR
600 E. 22ND ST.
KANSAS CITY, MO 64108
816-471-3000
MENENDEZ, JOSE O P
P. O. BOX 748
INDEPENDENCE, MO 64052
816-254-3652
MERVEILLE, OCTAVE C PD
24TH AND GILLHAM RD
KANSAS CITY, MO 64108
816-234-3676
MESTED, PETER H AN
ANESTHESIA ASSOCIATES
6400 PROSPECT SUITE 142
KANSAS CITY, MO 64132
444-1139
METZL, KURT PD
601 E 63RD
KANSAS CITY, MO 64110
816-363-6118
MEYER, PAUL W ORS
610 MEDICAL PLAZA
4320 WORNALL RD.
KANSAS CITY, MO 64111
816-531-5757
MEYER, ROBERT O IM
25 E 70TH. STREET
KANSAS CITY, MO 64113
816-444-6384
MICHELSON, RICHARD B GPM
P.O.BOX 169
3637 BROADWAY
KANSAS CITY, MO 64141
816-932-5359
MILES, GEO O GS
9020 MISSION RD.
SHAWNEE MISSION, KS 66206
913-341-6138
MILGRAM, BYRON A P
6724 TROOST
KANSAS CITY, MO 64131
816-444-5161
MILLER, CLINT L OM
615 W 3RD ST
LEE'S SUMMIT, MO 64063
816-524-3799
MILLER, GERALD L OBG
8417 ENSLEY LANE
SHAWNEE MISSION, KS 66206
913-642-6446
MILLER, GERALD L JR OBG
RESEARCH OFF TOWERS BLDG
T301, 6420 PROSPECT
KANSAS CITY, MO 64132
816-444-6888
MILLER, MAX I AN
5620 HIGH DR
SHAWNEE MISSION, KS 66208
MILLER, MICHAEL R IM
WAYNE MINER HEALTH CENTER
825 EUCLID AVE.
KANSAS CITY, MO 64124
816-474-4920
MILLER, WILSON H IM
6420 PROSPECT AVE.
SUITE T-305
KANSAS CITY, MO 64132
816-444-4114
MINNIGERODE, LANA K PM
REHABILITATION INST.
3011 BALTIMORE
KANSAS CITY, MO 64108
816-756-2250
MINNIGERODE, TURNER L IM
RESEARCH HOSP. & MED. CTR.
2316 E. MEYER BLVD.
KANSAS CITY, MO 64132
816-276-4167
MIR, ABDUL R IM
1734 E 63RD ST
KANSAS CITY, MO 64110
816-444-2098
MITCHELL, ANDREW D U
4320 WORNALL RD
KANSAS CITY, MO 64111
816-753-2033
MITCHELL, JOHN D U
220 PENN PARK
2928 MAIN
KANSAS CITY, MO 64108
816-561-7414
MITCHELL, ROBT H OBG
410 BRYANT BLDG
1102 GRAND AVE
KANSAS CITY, MO 64106
816-471-1330
MITRA, NIRMAL K PD
11201 COLORADO
KANSAS CITY, MO 64137
816-761-0775
MIXSON, WM C OBG
4320 WORNALL RD
KANSAS CITY, MO 64111
816-531-9400
MONGAN, JAMES J GP
2220 HOLMES RD.
KANSAS CITY, MO 64108
816-421-6103
MONTELLO, SAMUEL A OBG
SUITE T-307
6420 PROSPECT
KANSAS CITY, MO 64132
816-361-4747
MOOK, DAVID G IM
9734 WORNALL
KANSAS CITY, MO 64114
816-941-9200
MOONEY, JUSTIN L D
6740 W 52ND PL
SHAWNEE MISSION, KS 66202
913-362-5888
MOORE, DAVID L GS
4400 BROADWAY
KANSAS CITY, MO 64111
816-753-4404
MOORE, JACK O U
4320 WORNALL RD
KANSAS CITY, MO 64111
816-753-2033
MOORE, JOHN M IM
402 E 37TH STREET
APT. 20
KANSAS CITY, MO 64109
816-531-8684
MOORE, Y. SCOTT P
WESTERN MO MENT. HLTH CTR.
600 E. 22ND ST.
KANSAS CITY, MO 64108
816-471-3000
MORANTZ, ROBERT A N
400 ROCKHILL MEDICAL BLDG.
6700 TROOST
KANSAS CITY, MO 64131
816-363-2500
MOREANO, ARMANDO H GP
2929 BALTIMORE
310 PENN PARK MED BLDG.
KANSAS CITY, MO 64108
816-531-3530
MOREST, F S IM
12818 B COPPER CLIFF AVE.
AUSTIN, TX 78758
MORGAN, DAVID B O
4620 J C NICHOLS PKWY
KANSAS CITY, MO 64112
816-561-2200
MORGAN, WM R PS
CARONDELET MEDICAL BLDG
1010 CARONDELET DR-S
KANSAS CITY, MO 64114
816-942-5900
MORRIS, J H IM
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
816-356-8877
MORRIS, TERRY V OBG
1515 W. TRUMAN RD.
INDEPENDENCE, MO 64050
816-836-4200
MORRISON, DONALD H AN
4545 WORNALL RD
KANSAS CITY, MO 64111
816-932-2033
MORRISON, J S P
4320 WORNALL RD.
SUITE 118
KANSAS CITY, MO 64112
MOSBACHER, HUGH E PS
109 IRONBARK LAKEWOOD
LEE'S SUMMIT, MO 64063
816-373-7493
MOSS, PAUL GE
4706 BROADWAY
KANSAS CITY, MO 64112
816-531-8733
MOUNTFORD, DAMON W EM
10005 E. 67TH ST.
RAYTOWN, MO 64133
816-356-1000
MUELLER, MARTIN J IM
6420 PROSPECT AVE.
SUITE T101
KANSAS CITY, MO 64132
816-363-4100
MUENCH, LAURENCE W AN
8010 SAGAMORE
SHAWNEE MISSION, KS 66206
913-649-3541
MULLEN, CHRISTOPHER J IM
UMKC-GOLD 4
2411 HOLMES
KANSAS CITY, MO 64108
816-474-4100
MULLEN, LEO M GP
4443 PASEO BLVD
KANSAS CITY, MO 64110
816-921-5411
MUNDY, WM L IM
9734 WORNALL RD.
KANSAS CITY, MO 64114
816-941-9200
MUNYAN, EARL A IM
17221 E. 23RD ST.
SUITE 113
INDEPENDENCE, MO 64057
816-373-1122
MURPHY, EVERETT M III PUO
545 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
816-561-6277
MURPHY, JAMES J P
C/O SITES
7829 HEDGES
KANSAS CITY, MO 64138
816-331-2100
MURPHY, ROBT J D
6428 HIGH DR.
SHAWNEE MISSION, KS 66208
913-362-7305
MUTCHNICK, NORMAN GS
6724 TROOST
SUITE 910
KANSAS CITY, MO 64131
816-333-2000
MUTHER, RICHARD S IM
500 ROCKHILL MED. BLDG.
6700 TROOST
KANSAS CITY, MO 64131
816-361-0670
MYERS, GEO H U
1010 CARONDELET DR
KANSAS CITY, MO 64114
816-942-4243
MYERS, JOHN S OM
425 HUNTINGTON RD
KANSAS CITY, MO 64113
816-444-4334
MYERS, ROBT M FP
2310 STONE BLVD.
RAYMORE, MO 64083
816-322-0233
MYRON, MARK C IM
1016 W. 69TH TERR.
KANSAS CITY, MO 64113
816-361-5208
NAIME, MANSOUR J PD
136 ROCKHILL MED BLDG
6700 TROOST
KANSAS CITY, MO 64131
816-363-3337
NELSON, BENTLEY A OTO
1010 CARONDELET DR.
SUITE 224
KANSAS CITY, MO 64114
816-942-7200
NESSELRODE, JOHN H GS
1515 W TRUMAN RD
STE 402
INDEPENDENCE, MO 64050
816-254-9292
NEUMANN, JAMES W N
215 PEN PARK BLDG
2929 BALTIMORE
KANSAS CITY, MO 64108
816-756-0293

NEWMAN, ROBT L OBG
ST LUKES HOSP
44TH & WORNALL RD
KANSAS CITY, MO 64111
816-932-2047

NICHOLAS, THOMAS A FP
DEPT. OF FAMILY PRACTICE
LITTLE BLUE-LEES SUMMIT
KANSAS CITY, MO 64139
816-373-4415

NICHOLIS, GEORGE R PD
373 W. 101ST TERR.
KANSAS CITY, MO 64114
816-942-8200

NICKELL, BARRY L IM
132 MEDICAL PLAZA
4320 WORNALL RD.
KANSAS CITY, MO 64111
816-561-1533

NIELSON, MICHAEL H OBG
1515 W TRUMAN RD ST 306
INDEPENDENCE, MO 64050
816-836-4200

NIGRO, EDWARD R CO
1340 S OCN BLV #2209
POMPANO BEACH, FL 33062

NIGRO, JOS A GS
5715 WINDSOR DR
SHAWNEE MISSION, KS 66205
913-831-4079

NIGRO, THOMAS L GS
TRUMAN MEDICAL CENTER
2301 HOLMES
KANSAS CITY, MO 64108
816-556-3505

NOBACK, RICHARDSON K IM
UMKC SCHOOL OF MED
2411 HOLMES
KANSAS CITY, MO 64108
816-474-4100

NOLTENSMEYER, MILTON H AN
3305 W 50TH TERR
SHAWNEE MISSION, KS 66205
913-236-6973

NOVAK, EDWARD J PM
VETERANS HOSPITAL
2200 GAGE BLVD.
TOPEKA, KS 66622

O'FARRELL, THOS P GS
SUITE 503
6420 PROSPECT
KANSAS CITY, MO 64132
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816-493-2211

DAVAULT, GEO K GP
MEDICAL CENTER
RICHMOND, MO 64085
816-776-2201

DE MOTTE, JEANNE M FP
HWY 13 SOUTH
P O BOX 68
RICHMOND, MO 64085
816-776-5654

GEORGE, THEODORE GS
P O BOX 512
RICHMOND, MO 64085
816-776-5654

GILANI, ABDOLLAH GS
RT 4, BOX 54
RICHMOND, MO 64085
816-776-6945

KELLING, JORDAN A GP
KELLING CLINIC-HOSP
WAVERLY, MO 64096
816-493-2211

KUANGPARICHAT, MANOCH IM
1205 N. JESSE JAMES RD.
EXCELSIOR SPGS., MO 64024

LA HUE, WILLIAM C GS
1901 SLEEPY HOLLOW DR
LEXINGTON, MO 64067
B16-259-2747

LAI, HSIEN-ELL GP
1712 MAIN
HIGGINSVILLE, MO 64037
816-3B4-7300

MC FADDEN, GENE A GP
KELLING CLINIC
WAVERLY, MO 64096
816-493-2211

MEYER, JERRY L FP
834 MAIN ST
CONCORDIA, MO 64020
816-463-7966

NGUYEN, LAN K GS
KELLING CLINIC INC.
P.O. BOX 169
WAVERLY, MO 64096
816-493-2211

PAVLU, ROBT R GP
KELLING CLINIC HOSP
WAVERLY, MO 64096
816-493-2211

PIDUTTI, RICHARD W FP
1114 MAIN ST.
LEXINGTON, MO 64067
B16-259-2216

RILEY, CHAS T FP
220 HIGHWAY 13 SOUTH
RICHMOND, MO 64085
B16-776-6945

UHRIG, JACK R IM
114 W. KELLING AVE.
WAVERLY, MO 64096
816-493-2211

VAJARANANT, MANIT OBG
1028 MAIN
LEXINGTON, MO 64067
816-259-2216

WARD, JOE W GP
1028 MAIN ST
LEXINGTON, MO 64067
816-259-2216

WILLIAMS, JOHN W OM
801 W 15TH
OAK GROVE, MO 64075
816-625-4772

120—LAKE OF THE OZARKS (Camden-Miller-Morgan-Counties)

BUEHLER, CARL T GP
6 S MAPLE ST
ELDON, MO 65026

COOPER, ROBERT W GP
LAKE RD. AA1
CAMDENTON, MO 65020
314-346-5656

DICKERSON, WILLIAM J IM
RT. 1, BOX 188-1B
OSAGE BEACH, MO 65065
314-34B-2723

FOTOPOULOS, CHRIS K GS
P O BOX 128
OSAGE BEACH, MO 65065
314-34B-3060

GARRISON, THEODORE W GP
P O BOX 356
CAMDENTON, MO 65020
314-348-3181

GUNN, JACK GP
P. O. BOX 160
VERSAILLES, MO 65084
314-378-4666

HAYDEN, MELVIN R GP
P. O. BOX 789
CAMDENTON, MO 65020
314-346-5624

HOLLEY, DONALD B GP
P. O. BOX 789
CAMDENTON, MO 65020
314-346-5624

KAUFFMAN, RUTH GP
P. O. BOX 160
VERSAILLES, MO 65084
314-378-4666

LYLE, ROBT R GP
P. O. BOX 160
VERSAILLES, MO 65084
314-378-4666

MOSELEY, OTIS O GP
BOX 248
OSAGE BEACH, MO 65065
314-348-2745

MURRAY, ROBERT G FP
HIGHWAY 7 EAST
CLIMAX SPRINGS, MO 65324
314-347-2350

O'CONNOR, EDWARD F OPH
P. O. BOX 277
VERSAILLES, MO 65084
314-378-5269

SMELTZER, FREDERICK M R
LAKE OF THE OZARKS HOSP.
OSAGE BEACH, MO 65065
314-348-3181

THARP, JUDITH L EM
RT 1, BOX 271-M
CAMDENTON, MO 65020
314-348-3181

TIETJEN, FRED O ORS
P. O. BOX 187
OSAGE BEACH, MO 65065
314-348-3181

VANDIVER, VIRGIL D AN
P. O. BOX 248
OSAGE BEACH, MO 65065
314-348-2745

WASHBURN, JOHN L GP
BOX 109 BANK BLDG
VERSAILLES, MO 65084
314-34B-4203

130—MARION-RALLS-SHELBY

AHLUM, SANDRA J OBG
HANNIBAL CLINIC
711 GRAND AVE.
HANNIBAL, MO 63401
314-221-5250

AVILA, ESTRELLA Z IM
110 MAGNOLIA AVE
HANNIBAL, MO 63401
314-221-7176

AVILA, PATRICIO C GS
110 MAGNOLIA AVE
HANNIBAL, MO 63401
314-221-7176

BACH, LYSLE M R
4209 W ELY RD
HANNIBAL, MO 63401
314-221-5500

BELL, ROBT M P
P. O. BOX 551
HANNIBAL, MO 63401
314-221-0414

BORROMEO, CARLOS J PD
603 COUNTRY CLUB DR
HANNIBAL, MO 63401
314-221-4368

BUBEN, ROBT W GS
2910 ST MARYS AVE
HANNIBAL, MO 63401
314-221-0996

BUKSTEIN, MICHAEL J GS
P.O.BOX 311
HANNIBAL, MO 63401
314-221-5250

BURNS, FRANCIS R OBG
TOWER PLAZA
CLINIC RD
HANNIBAL, MO 63401
314-221-2116

BURTON, DALE F GS
P O BOX 311
HANNIBAL, MO 63401
314-221-5250

CLISHAM, JOHN F U
P. O. BOX 127
HANNIBAL, MO 63401
314-221-2744

COMER, JULIAN R DR
RT. 3, BOX 147
NEW LONDON, MO 63459
314-221-5500

FLORENDO, FEDERICO N PTH
LEVERING HOSP
HANNIBAL, MO 63401
314-221-0826

FLORENDO, PURIFICACION T OBG
TOWER PLAZA-CLINIC RD
HANNIBAL, MO 63401
314-221-2116

FOREMAN, PHILLIP B GS
P O BOX 311
HANNIBAL, MO 63401
314-221-5250

GREENE, HARRY L CD
109 B VIRGINIA
HANNIBAL, MO 63401
314-221-0364

HA, JUNE Y IM
33 SATELLITE DR.
HANNIBAL, MO 63401
314-221-5250

HALL, STANLEY G PTH
SYCAMORE SPRING
RFD #2
HANNIBAL, MO 63401
314-221-5646

HAMLIN, WYETH IM
P. O. BOX 311
HANNIBAL, MO 63401
314-221-5250

*HEVEL, ROBERT W FP
197 GEMINI
HANNIBAL, MO 63401
314-769-2231

HINDS, ROY D AN
RT #3
HANNIBAL, MO 63401
314-221-2110

JAYANANDAIAH, HIREMATHADA P
4 BRIARWOOD
HANNIBAL, MO 63401
314-221-5250

JOHNSON, LENT C III FP
HANNIBAL CLINIC
711 GRAND AVE.
HANNIBAL, MO 63401
314-221-5250

KRUSE, CARL R FP
706 S DICKERSON ST
PALMYRA, MO 63461
314-769-2335

KWON, YONGSOO GS
STEAMBOAT CLINIC SHPG CTR.
102 STEAMBOAT BEND
HANNIBAL, MO 63401
314-248-1136

LICHTY, CHAS A GP
SHELBINA, MO 6346B
314-588-4476

MANN, JAMES K PD
4074 HILLSIDE DRIVE
HANNIBAL, MO 63401
314-221-5250

MC HARDY, BRYSON R JR PD
711 GRAND AVE.
HANNIBAL, MO 63401
314-221-5250

PALMER, RUSSELL H GP
706 S DICKERSON ST
PALMYRA, MO 63461
314-769-2335

PLOWMAN, EDWARD M OPH
B AND L BLDG
HANNIBAL, MO 63401
314-221-1585

RAPP, EARL L GP
BOX 311
HANNIBAL, MO 63401
314-221-5250

ROLLER, MERRILL J GP
2910 ST MARY'S AVE
HANNIBAL, MO 63401
314-221-0996

STEELE, JAMES C OBG
2802 MARSH AVE
HANNIBAL, MO 63401
314-221-5250

---

* Doctor of Osteopathy.

STRANGE, LESLIE C OTO
1604 SAXONY
FT WORTH, TX 76116
WALTERSCHEIO, JOHN H GP
1209 BROADWAY
HANNIBAL, MO 63401
314-221-4910
WELL, JULIUS W GP
111 E OLIVE ST
PALMYRA, MO 63461
314-769-4422

135—MID-MISSOURI
(Phelps-Crawford-Dent-Pulaski-Maries Counties)

BARTLETT, HUGH C GP
1100 W 10TH ST
ROLLA, MO 65401
314-364-6051
8AUMANN, ALBERT R GP
STEELVILLE, MO 65565
314-775-2119
BHATI, OEO K GS
404 W. ROLLA ST.
SALEM, MO 65560
314-729-3129
BREEOEN, RICHARO L N
SUITE 120 1100 W. 10TH
ROLLA, MO 65401
364-4226
BUTTS, JAMES D GP
100 AORIAN
ROLLA, MO 65401
314-364-4356
CRAIG, HERBERT W ORS
RT. 3, BOX 180
ROLLA, MO 65401
314-341-2678
OEBOARO, JAMES W AN
1000 W. TEN STREET
ROLLA, MO 65401
314-364-3100
ORAKE, AVERY A OPH
4357 N 106TH AVE
PHOENIX, AZ 85039
ORAPER, BERNARO L OBG
1100 W 10TH ST
ROLLA, MO 65401
314-364-6700
ELOERS, FRANK A GP
RT 1 BOX 69A
CU8A, MO 65453
314-885-2311
FEINO, EARL E GP
BOX B
ROLLA, MO 65401
314-364-4226
FELTS, JAMES A FP
1100 W. 10TH ST.
ROLLA, MO 65401
314-364-4226
FORTIN, JORGE A OBG
1100 W. TENTH ST.
ROLLA, MO 65401
314-364-8100
GRANNEMANN, H. NEAL PTH
1000 W 10TH ST
ROLLA, MO 65401
314-364-5060
HAMMLER, CHRISTIANA V GP
PHELPS COUNTY HOSP
ROLLA, MO 65401
HEILBRUNN, ILSE OS
12038 FORUM
ROLLA, MO 65401
314-341-2800
HOOSHMANO, AHMAO N
915 SW BLVD. SUITE E
JEFFERSON CITY, MO 65101
314-634-4700
KHAN, MOHAMMED V.H. IM
9939 AFFTON PLACE
ST. LOUIS, MO 63123
314-638-3136
LINOE, JOHN W OPH
1100 W. TENTH ST.
ROLLA, MO 65401
314-341-2230
MARTI, LARRY B ORS
1100 W 10TH ST
ROLLA, MO 65401
314-341-2678
MATSUOA, GORDON T U
1100 W. 10TH ST.
ROLLA, MO 65401
314-364-3535
MITCHELL, ROY E GP
RT. 5, BOX 36
SALEM, MO 65560
314-729-3252
MORANZ, JOHN W ENT
P.O. BOX 73
BUNKER, MO 63629
314-689-2731
MYERS, JAMES M GP
P.O. DRAWER O
ROLLA, MO 65401
314-341-4284
PASKON, SETH IM
3RO JACKSON
SALEM, MO 65560
314-729-6036
PENOELL, PAUL W GS
1915 SHAMROCK AVE.
JOHN KNOX VILLAGE
LEE'S SUMMIT, MO 64063
POJANASOMBOON, PICHAT OPH
1100 W 10TH ST
ROLLA, MO 65401
314-364-5600
RUSSELL, BARBARA E PO
11TH AND BISHOP
ROLLA, MO 65401
314-364-4870
SAUNOERS, CAROL S PO
C/O RUSSELL YOUNG CLINI
11TH AND BISHOP ST
ROLLA, MO 65401
314-364-4870
SLAHOREK, GEORGE J PTH
GEN LEONARO WOOD ARMY H
PATHOLOGY DEPT
FORT LEONARO WO, MO 65473
314-368-9661
SMITH, TEO P FP
S&S ACRES ROUTE 2
ROLLA, MO 65401
314-364-4226
SPURRIER, MARK H GP
BOX 777
RICHLANO, MO 65556
314-765-5141
STRICKER, EAMIL A GS
10TH & BISHOP
ROLLA, MO 65401
314-364-3599
TANG, TEOOORO GS
BOX 437
SALEM, MO 65560
314-729-6800
THEOBALO, STERLING FP
BOX 7116 A
ST. LOUIS, MO 63177
VILELA, OSWALDO E OBG
909 S. PERSHING
SALEM, MO 65560
314-729-3194
WHITE, EUGENE F OBG
1100 W TENTH ST.
ROLLA, MO 65401
314-364-8100
WIENCH, OELANE F PTH
1000 WEST 10TH ST
ROLLA, MO 65401
314-364-5060
YOUNG, ROBT B FP
700 W 11TH ST
ROLLA, MO 65401
314-364-4870

138—MINERAL AREA
(St. Francois-Iron-Madison-Washington-Reynolds-Bollinger Counties)

APPLEBERRY, CHAS H P
43 ST. JOE ST.
FLAT RIVER, MO 63601
314-431-3422
BENTINGANAN, VICTOR O GS
703 W MAIN STREET
FREOERICKTOWN, MO 63645
314-783-7249
CANCELAOA, JUAN V OBG
NORTH STREET
FARMINGTON, MO 63640
314-756-6751
CARLETON, CHAS E GP
MED ARTS CLINIC
FARMINGTON, MO 63640
314-756-6751
CHASTAIN, CHAS W FP
FAMILY HEALTH CARE
815 E. MAIN ST.
FLAT RIVER, MO 63601
314-431-6600
OAVIS, THOMAS N P
STATE HOSPITAL
FARMINGTON, MO 63640
314-756-6792
OENNIS, WM P GP
1000 N MAIN ST
OESLOGE, MO 63601
314-431-4414
OENT, GEORGE W OBG
MEDICAL ARTS CLINIC
301 WEST LIBERTY
FARMINGTON, MO 63640
314-756-6751
OETTMER, ROBT F GP
128 W RUSSELL
IRONTON, MO 63650
314-546-2415
OIERKER, HARRY O FP
301 W LIBERTY ST
FARMINGTON, MO 63640
314-756-6751
OURST, EOWARO F GS
301 W. LIBERTY
FARMINGTON, MO 63640
FARMER, NORMA O P
15 WESTMOUNT DR.
FARMINGTON, MO 63640
314-756-7803
GEORGE, P A IM
703 WEST MAIN
FREOERICKTOWN, MO 63645
314-783-5548
GRAY, WALTER C GP
301 W LIBERTY
FARMINGTON, MO 63640
314-756-6751
HAROY, STANTON L FP
1000 N MAIN ST
OESLOGE, MO 63601
314-431-3128
HARTMANN, THOMAS G FP
301 W. LIBERTY
FARMINGTON, MO 63640
314-756-6751
HOCTOR, EMMETT F P
STATE HOSP NO 4
FARMINGTON, MO 63640
314-756-6792
HUCKSTEP, ROBT A IM
301 W LIBERTY ST
FARMINGTON, MO 63640
314-756-6751
KARRAKER, ALVAN G GP
301 W LIBERTY ST
MEDICAL ARTS CLINIC
FARMINGTON, MO 63640
314-756-6751
KIM, LONGIUS H GS
#3 AUSTIN PLAZA
POTOSI, MO 63664
314-438-2188
LAM, WM (HING-SHUI) GS
HIGHWAY 106 W.
BOX 428
ELLINGTON, MO 63638
314-663-2226
MANUSMARE, USHA P GP
FARMINGTON STATE HOSPITAL
FARMINGTON, MO 63640
314-756-6792
MC KINNEY, WILLIAM O JR. FP
202 W RUSSELL
IRONTON, MO 63650
314-546-7311
MENNE, MARVIN C GP
BOX 339
PILOT KNOB, MO 63663
314-546-7437
MULLEN, JACK IM
30 N ALLEN ST
BONNE TERRE, MO 63628
314-358-3343
NEUKOM, GEO 8 P
1528 NORTH 7TH ST.
TERRE HAUTE, IN 47807
NEWCOMB, ARTHUR O US
P.O. BOX 722
CARTHAGE, MO 64836
417-358-4899
OLIVER, GEO A GS
MEDICAL ARTS CLINIC
FARMINGTON, MO 63640
314-756-6751
PARKER, GARY J IM
301 W. LIBERTY ST.
FARMINGTON, MO 63640
314-756-6751
PICHARDO, JAVIER A P
701 EASTBRIDGE DR.
ST. PETERS, MO 63376
SIMPELO, RUSTICO V GS
AUSTIN PLAZA
POTOSI, MO 63664
314-438-5408
STALEY, DAVIO L FP
#4 PARKWAY SHOPPING CTR
POTOSI, MO 63664
314-438-6178
STEELE, GEORGE M JR. GP
GENERAL DELIVERY
VAN BUREN, MO 63965
314-323-4253
TAYLOR, VAN W GS
54 CHURCH ST
BONNE TERRE, MO 63628
314-358-3474
TUTTLE, JAY F P
421 HICKORY GLEN LANE
ST LOUIS, MO 63141
314-434-7254
WATKINS, GEO L GS
BOX 1745
RANCHO SANTA FE, CA 92067

142—MONITEAU

FULKS, RICHARO 8 GP
BOX 410
CALIFORNIA, MO 65018
314-796-2523

GALLAGHER, LIONEL M GP
102-A DAHLER ST
CALIFORNIA, MO 65018
314-796-3312
LATHAM, KENYON S GP
109 N HIGH
CALIFORNIA, MO 65018
314-796-2541

146—MONTGOMERY

BYLAND, SAML J GP
120 HUDSON ST
WELLSVILLE, MO 63384
314-684-2208

158—NORTHWEST (Nodaway-Holt-Atchison-Gentry-Worth Counties)

BARE, EDWARD F GP
102 S 6TH
TARKIO, MO 64491
816-736-4193
BAUMAN, HENRY C GP
929 WEST 3RD
MARYVILLE, MO 64468
816-582-2742
BYLAND, BENJ F GS
P O BOX C
MARYVILLE, MO 64468
816-582-2156
CARLIN, ALBERT L GP
PARK AVE
STANBERRY, MO 64489
CARPENTER, WALLACE GP
100 CASS ST
ROCK PORT, MO 64482
816-744-5361
DEAN, WALTER E FP
HIGHWAY 71 SOUTH
MARYVILLE, MO 64468
816-582-2153
DIZNEY, DESMION M FP
NW MO ST UNIV-COLBERT H
MARYVILLE, MO 64468
816-582-7141
DUNDEE, JOHN T R
ST FRANCIS HOSPITAL
MARYVILLE, MO 64468
816-582-8152
DUNSHEE, ROBT E FP
406 1/2 NORTH MAIN STRE
MARYVILLE, MO 64468
816-582-4571
HARR, PATRICK B FP
HIGHWAY 71 S
MARYVILLE, MO 64468
816-582-2153
HAVALDAR, KANTI L IM
HWY 71 SPO BOX C
MARYVILLE, MO 64468
816-582-2156
HUMPHREY, JAMES D FP
MOUND CITY, MO 64470
816-442-5433
HUNTER, JAMES K JR. FP
HIGH & MAIN
FAIRFAX, MO 64446
816-686-2276
IMES, ELVIN D FP
P.O. BOX 188
BULL SHOALS, AR 72619
JEFFERIS, KENNETH R GS
P.O. BOX 349
MARYVILLE, MO 64468
816-582-2153
MATTESON, FRANK B GP
21 W 3RD ST
GRANT CITY, MO 64456
816-564-3323
NIEDERMEYER, EDWARD L GP
305 BROAD ST
TARKIO, MO 64491
816-736-4121
RUNEZ, MANUEL W GS
BOX 100
MARYVILLE, MO 64468
TENORIO, ARTURO A GS
MAIN & WILLOW STREETS
STANBERRY,, MO 64489
816-783-2735
TENORIO, GENOVEVA P
MAIN & WILLOW STS.
STANBERRY,, MO 64489
816-783-2735
WANAMAKER, JOHN M GP
110 MILL ST W
ROCK PORT, MO 64482
816-744-5454
WEMPE, GEO R FP
P O BOX C
MARYVILLE, MO 64468
816-582-2156

162—NORTH CENTRAL (Adair-Schuyler-Knox-Sullivan-Putnam Counties

ENGLISH, MILTON T ORS
2902 N BALTIMORE
KIRKSVILLE, MO 63501
PHILLIPS, RONALD L FP
600 S. BALTIMORE
KIRKSVILLE, MO 63501
TARVYDAS, FRANCIS US
EDINA, MO 63537

166—OZARKS (Barry-Lawrence-Christian-Newton-McDonald Counties)

ANDERSON, PAUL B GP
113 W HICKORY
NEOSHO, MO 64850
APOSTOL, ANDRES G GS
801 LINCOLN ST
MONETT, MO 65708
BARNES, LARRY G IM
113 W HICKORY
NEOSHO, MO 64850
BETZ, RICHARD J IM
SALE MEM HOSP
NEOSHO, MO 64850
BETZ, ROBERT F GS
113 WEST HICKORY
NEOSHO, MO 64850
BIZEK, JOS L GS
500 A PORTER
AURORA, MO 65605
417-678-5175
BLANKENSHIP, GEO W GP
ROUTE #6 BOX 385
NEOSHO, MO 64850
BOWMAN, MELVIN C GP
DRAWER 10
NEOSHO, MO 64850
BROWN, FREDERICK B GP
500 PROTER
FAMILY MEDICINE ASSOC.
AURORA, MO 65605
417-678-5176
CAMPBELL, DANIEL C TS
STATE CHEST HOSPITAL
MOUNT VERNON, MO 65712
CARTER, JAMES R GS
113 W HICKORY ST
NEOSHO, MO 64850
CHRISTIANSON, CHAS S PUD
ROUTE 1
BOX 85
MOUNT VERNON, MO 65712
CRUZ, SERGIO G IM
ST VINCENT HOSP
801 LINCOLN
MONETT, MO 65708
DABBS, WILBUR D GP
SALE MEM HOSP
NEOSHO, MO 64850
DONLEY, ROBT R GP
617 W CLEVE
MONETT, MO 65708
EDWARDS, FRANCIS L IM
P.O. BOX 230
MONETT, MO 65708
ESPARRAGO, F R GS
808 EUCLID
MONETT, MO 65708
417-235-3137
GALINSKY, LEON J PUD
3019 N. EASTGATE DR.
MCCORMICK PLACE II
TUCSON, AZ 85712
GARDNER, JOS W GP
RT. 5, BOX 303
8 WALNUT LANE
KIMBERLING CITY, MO 65686
GLASS, WM J GP
315 A BROADWAY
MONETT, MO 65708
GLOVER, WM A GP
207 S MARKET ST
MOUNT VERNON, MO 65712
GRAVES, ARTHUR J GP
BOX 190
MOUNT VERNON, MO 65712
GUDAPATI, RAO R IM
203 WASHINGTON
AURORA, MO 65605
417-678-3507
HALVERSON, LARRY W FP
500-A PORTER AVE.
AURORA, MO 65605
HAMILTON, WM P GP
BOX 469
AURORA, MO 65605
HELLWEG, CHAS E PUD
MOUNT VERNON, MO 65712
HUNTINGTON, IONE PUD
P. O. BOX 158
SHELL KNOB, MO 65747
KENNEY, ROY E GP
113 W HICKORY
NEOSHO, MO 64850
KERR, FRANK T GP
511 W CLEVELAND
MONETT, MO 65708
LENTZ, HAROLD C GP
113 WEST HICKORY ST.
NEOSHO, MO 64850
MC MILLAN, DAVID L IM
113 WEST HICKORY
NEOSHO, MO 64850
MONTELLANO, ARTURO H OBG
808 EUCLID
MONETT, MO 65708
MORRISON, THOS A GP
203 WASHINGTON
AURORA, MO 65605
NEWMAN, MARY J GP
P O DRAWER H
CASSVILLE, MO 65625
OCCENO, VICTOR G GS
808 EUCLID
MONETT, MO 65708
OLIVE, GEO C A
113 W HICKORY ST
NEOSHO, MO 64850
SARDJONO, HERMAN IM
88 GRAVEL ST.
CASSVILLE, MO 65625
TAYLOR, LEO T AM
P O BOX 249
NEOSHO, MO 64850
WHITE, RUSSELL D GP
DOCTORS BLDG
500-A PORTER AVE
AURORA, MO 65605
WILLIAMS, JAMES R R
500 PROTER ST.
AURORA, MO 65605

170—PEMISCOT

BENITONE, JERRY D GS
P.O. BOX 843
CARUTHERSVILLE, MO 63830
314-333-1520
BERNARD, JAMES W GP
DOCTORS CLINIC BOX 201
CARUTHERSVILLE, MO 63830
314-333-1782
GRABLE, JAMES D GP
203 E 3RD ST
PORTAGEVILLE, MO 63873
314-379-5232
GUBIN, ALAN S PD
106 W 12TH ST
CARUTHERSVILLE, MO 63830
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SUITE A1
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ALVIS, EOMUNO B OPH
211 N MERAMEC
ST LOUIS, MO 63105
314-863-4200

AMADO-LEOO, OAVIO E FP
3355 TAMIAMI TRAIL, #B
PORT CHARLOTTE, FL 33952

AMANAT, HABIBOLLAH JR EM
232 S WOOOSMILL
ST LUKES HOSPITAL
CHESTERFIELO, MO 63017
314-434-1500

AMIN, NAVIN J OPH
100 N. EUCLIO AVE.
SUITE 310
ST LOUIS, MO 63108
314-367-7077

AMJAO, MOHAMMAO T PO
10004 KENNERLY RO.
ST. ANTHONY MEO. BLOG.
ST. LOUIS, MO 63128
314-849-6030

ANOERSON, CHARLES B GS
6343 ALEXANOER OR
CLAYTON, MO 63105
314-454-3081

ANOERSON, JOHN M P
100 N EUCLIO
ST LOUIS, MO 63108
314-361-6100

ANGLO, LUIS B FP
10004 KENNERLY RD
SUITE 155
ST LOUIS, MO 63128
314-849-1200

ANSLINGER, OAVIO L IM
14329 LAKE TAHOE OR
CHESTERFIELO, MO 63017
314-821-9150

ANSTEY, GEO C OBG
10449 ST CHARLES ROCK R
ST ANN, MO 63074
314-429-1900

ANSTEY, JOHN T OBG
#15 HORTENSE PL
ST LOUIS, MO 63108
314-429-1900

ANTONIOU, CHRIS A PO
3434 BRIOGLAND
BRIOGETON, MO 63044
314-291-4994

ANWAR, MOHAMMAO A GE
11115 NEW HALLS FERRY ROAD
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AQUINO, TOMAS I PTH
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ST LOUIS, MO 63141
314-569-6120

ARCELONA, JESUS A GP
3535 S JEFFERSON
ST LOUIS, MO 63118
314-773-3727

ARCHER, CAROL R R
1325 S GRANO
ST LOUIS, MO 63104
314-77107600

ARENOS, PROCESO T GS
3009 N BALLAS RO. #216
ST. LOUIS, MO 63131
314-567-5377

ARIAS, FERNANOO OBG
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-454-2342

ARNESON, AXEL N OBG
6536 OEVONSHIRE
ST LOUIS, MO 63109
314-367-0353

ARNEY, WM G P
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
314-351-5927

ARNOLO, KENNETH J GS
6107 QUEENY TOWER
4989 BARNES HOSP. PLAZA
ST LOUIS, MO 63110
314-454-2100

ARNOT, JOHN P ORS
1034 S BRENTWOOO BLVO
ST LOUIS, MO 63105
314-721-7325

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141 N MERAMEC
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ARRIBAS, NEVA P OPH
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4949 BARNES HOSP. PLAZA
ST LOUIS, MO 63110
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ST. LOUIS, MO 63109
314-481-4866

ASGHAR, MOHAMMAO GP
400 N PLEASANT
CENTRALIA, IL 62801
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2821 N. BALLAS RO.
ST LOUIS, MO 63131
314-567-7370

AUCLAIR, RONALO J RHU
456 N. NEW BALLAS RO.
ST. LOUIS, MO 63141
314-569-3305

AUER, ARTHUR I GS
667 LANGTON
ST LOUIS, MO 63105
314-567-6666

AUFDERHEIOE, G. RUSSELL IM
216 NORTHLANO MEO. BLOG
ST LOUIS, MO 63136
314-383-6818

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AUTIN, JAMES L OTO
1325 S. GRANO
ST. LOUIS, MO 63104
314-771-7600

AVINS, LAURENCE R OPH
UNIV. CLUB TOWER
1034 S. BRENTWOOO
ST. LOUIS, MO 63117
314-727-6711

AVIOLI, LOUIS V IM
216 S KINGSHIGHWAY
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AVONOET, ALAN G IM
4989 BARNES HOSPITAL
ST. LOUIS, MO 63110
314-454-2000

AYATA, SEDAT M AN
6420 CLAYTON RD
ST LOUIS, MO 63117
314-644-3000

AYER, ANGELA G OPH
2601 N. WHITTIER ST.
ST. LOUIS, MO 63108
314-371-3100

AYKENT, YAVUZ CO
950 FRANCIS PL
ST LOUIS, MO 63105
314-726-6512

AYLWARO, HOWARD J JR IM
911 S BRENTWOOO BLVO
ST LOUIS, MO 63105
314-725-2100

AYLWARD, HOWARD J SR PS
6651 CHIPPEWA
ST LOUIS, MO 63109
314-647-8895

AYRES, STEPHEN M IM
1325 SOUTH GRAND BLVD
ST LOUIS, MO 63104
314-771-7600

AYVAZIAN, VATCHE H GS
615 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-6442

AZU, CHARLES C GS
2601 N. WHITTIER
ST. LOUIS, MO 63113
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AZUMA, NOBUTAKA GP
3901 THOLOZAN
ST LOUIS, MO 63116

AZZAM, FARID J AN
1325 SOUTH GRAND BLVD.
ST. LOUIS, MO 63104
314-865-4000

BABKA, JOSEPH J GS
10004 KENNERLY RD.
ST LOUIS, MO 63128
314-849-2500

BACKER, MATT H OBG
10345 WATSON RD
ST LOUIS, MO 63127
314-965-6033

BAGBY, JAMES W D
#7 COUNTRY LIFE ACRES
ST LOUIS, MO 63131

BAGLAN, ROBERT J TR
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615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
454-3381

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14377 WOODLAKE DR.
CHESTERFIELD, MO 63017
314-878-6236

BAHL, OM P CD
10004 KENNERLY RD. #320
ST LOUIS, MO 63128
314-843-1660

BAILEY, DRENNAN GS
6356 CLAYTON RD
ST LOUIS, MO 63117
314-647-3834

BAILEY, WM H DPH
9157 MILTON AVE
ST LOUIS, MO 63114
314-423-2870

BALDWIN, RICHARD DRS
3009 NORTH BALLAS RD.
SUITE #204
ST LOUIS, MO 63131
314-569-2458

BALE, ROBERT D DBG
777 S. NEW BALLAS RD.
CREVE COEUR, MO 63141
314-567-5016

BALLAL, HEBRI S IM
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100

BALLINGER, WALTER F GS
4960 AUDUBON AVE
ST LOUIS, MO 63110
314-454-3423

BALSTER, VERNON H OM
819 LOCUST
ST LOUIS, MO 63101
314-621-4300

BAMSHAD, JERRY D
1120 GRAHAM RD
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314-831-2464

BANDLE, DONALD F P
3801 JANUARY AVE
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314-436-5103

BANEZ, COLITA L P
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ST LOUIS, MO 63144
314-664-8116

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13634 PEACOCK FARM RD
ST LOUIS, MO 63131
314-381-1204

BANTON, THOMAS J JR ORS
12255 DEPAUL DR
BRIDGETON, MO 63044
314-739-7654

BANTON, WILLIAM C II IM
13634 PEACOCK FARM RD.
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ST LOUIS, MO 63141
314-567-4442

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ST. LOUIS, MO 63141
314-569-6120

BARKER, EDWARD T PD
2821 N BALLAS RD
ST LOUIS, MO 63131
314-432-1854

BARKER, KENDALL H DR
28 HAMMEL
WEBSTER GROVES, MO 63119
314-968-0144

BARLOW, VAL J IM
1033 MANCHESTER RD.
ELLISVILLE, MO 63011
314-227-4400

BARNER, HENDRICK B CDS
1325 S GRAND BLVD
ST LOUIS, MO 63104
314-865-3210

BARNES, WALTER C JR GPM
800 N. LINDBERGH BLVD.
ST. LOUIS, MO 63166
314-694-8806

BARDUDI, ISSA F GS
297 S TAMIAMI DR NW
PORT CHARLOTTE, FL 33952
771-7600

BARRAGAN, HECTOR D GS
533 COUCH
C/O ST.JOS/HOS/MED/BLDG
ST. LOUIS, MO 63122
314-821-8997

BARRETT, SCOTT R JR OBG
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BARRETT, SCOTT R SR DBG
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ST LOUIS, MO 63112
314-367-6930

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BARTNICK, MITCHEL L GP
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314-638-2028

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224 S. WOODS MILL RD.
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CHESTERFIELD, MO 63017
314-434-1500

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CREVE COEUR, MO 63141
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2386 N HIGHWAY 67
FLORISSANT, MO 63033
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216 S. KINGSHIGHWAY BLVD.
ST LOUIS, MO 63110
314-454-7954

BAULA, ARMINDO G R
609 JEFFERSONIAN DR
ST LOUIS, MO 63125

BAUSCHARD, FREDERICK D D
6500 CHIPPEWA
ST LOUIS, MO 63109
314-832-6803

BEARE, J. BYRON U
12 COACH-N-FLOUR
ST. LOUIS, MO 63131

BEARE, LUCIA V AN
12 COACH N FOUR
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STUART, FL 33494
305-283-8255

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6651 CHIPPEWA
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ST LOUIS, MO 63141
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ST LOUIS, MO 63124

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BECKER, STANLEY C DPH
4401 HAMPTON
ST LOUIS, MO 63109
314-352-5500

BECKETTE, EDMUND DBG
1245 GRAHAM RD RM 302
FLORISSANT, MO 63031
314-837-3151

BECKMAN, DONALD E GP
4205 VIRGINIA AVE
ST LOUIS, MO 63111
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BEDWINEK, JOHN R
4511 FOREST PARK BLVD.
ST. LOUIS, MO 63108
314-454-3381

BEHBAHANI, PARVIZ M AN
1402 S. GRAND BLVD.
ST LOUIS, MO 63104
314-664-9800

BEHRENS, DONALD T GS
3654 S GRAND AVE
ST LOUIS, MO 63118
314-776-0568

BEHRENS, GERALD L GS
315 N. KIRKWOOD RD
ST LOUIS, MO 63122
314-966-8500

BEIDLE, RAYMOND J PD
12255 DEPAUL DR. #340
BRIDGETON, MO 63044
314-291-4727

BELEW, JOE E DBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0055

BELL, MARTIN J GS
500 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-6022

BENAGE, CLARENCE M GS
11115 NEW HALLS FERRY RD.
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BENEDICT, WILLIAM W IM
522 N NEW BALLAS RD
CREVE COEUR, MO 63141
314-567-3113

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950 FRANCIS PLACE
SUITE 219
ST. LOUIS, MO 63105
314-727-3087

BENNETT, KENNETH J GS
456 N NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0130

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119 CHURCH ST
ST LOUIS, MO 63135
314-521-1600

BENSON, JOHN F OBG
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
314-389-3750

BERAHA, NATHAN B PD
500 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-6000

BERARD, LOUIS N U
721 OLIVE ST-ROOM 912
ST LOUIS, MO 63101
314-241-5894

BERG, EDWARD F OPH
5 CEDARCREST
ST LOUIS, MO 63132
314-569-1558

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ST LOUIS, MO 63110
314-367-3122

BERG, RALPH FP
3203 S GRAND BLVD
ST LOUIS, MO 63118
314-773-7857

BERGER, EDWARD J IM
300 S GRAND BLVD
ST LOUIS, MO 63103
314-658-5794

BERGMAN, HUGO F GP
2920 MONITEAU DR.
ST LOUIS, MO 63121

BERGMANN, DWAYNE L U
6500 CHIPPEWA ST
ST LOUIS, MO 63109
314-351-5300

BERGMANN, JOHN F P
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-567-1958

BERGMANN, MARTIN TS
2821 N. BALLAS RD.
ST LOUIS, MO 63131
314-567-4373

BERGNER, GRACE E IM
GRANT MEDICAL CLINIC
114 N. TAYLOR
ST LOUIS, MO 6310B
314-534-B600

BERLAND, HARRY I R
141 N MERAMEC
CLAYTON, MO 63105
314-721-0242

BERMAN, WM OBG
4910 FOREST PARK BLVD
ST LOUIS, MO 6310B
314-361-5220

BERNABE, FLORINIO H OBG
2250 UNION RD
ST LOUIS, MO 63125
314-544-3700

BERNABE, OFELIA M IM
1642 FRONTENACWOOD LANE
FRONTENAC, MO 63131
314-544-3700

BERNDSEN, GERARD H FP
12933 TOPPING ESTATES
ST LOUIS, MO 63131
314-962-7B75

BERNI, ANTHONY A R
777 S NEW BALLAS ROAD
ST LOUIS, MO 63141
314-567-4350

BERNSTEIN, AARON M IM
7171 DELMAR
ST LOUIS, MO 63130
314-B63-0033

BERRY, JOHN W IM
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-872-7500

BERWALD, DAVID M GS
11789 NATURAL BRIDGE
BRIDGETON, MO 63044
314-731-2080

BERWALD, IRVIN I FP
747 OLD BOHOMME ROAD
ST LOUIS, MO 63132
314-731-20B0

BETTONVILLE, PAUL J IM
6331 PERSHING
ST LOUIS, MO 63130
314-965-7201

BHATTACHARYA, ARJUN GS
7200 MANCHESTER RD
ST LOUIS, MO 63143
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9903 GRAVOIS
AFTON, MO 63123
631-6200

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314-351-2005

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11133 DUNN RD.
ST LOUIS, MO 63136
314-355-2300

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965 MASONRIDGE RD
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314-567-5185

BIELLO, DANIEL R DR
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1034 SOUTH BRENTWOOOD
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1034 SO BRENTWOOD
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ST LOUIS, MO 63141
314-569-2240

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11115 NEW HALLS FERRY RD
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2851 NE 183RD ST
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25 WILLOW OAK LANE
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BINNINGTON, H B GS
621 S NEW BALLAS RD
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BINZ, DONALD E II FP
615 SO. NEW BALLAS RD.
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10287 CLAYTON
ST LOUIS, MO 63124
314-997-27B3

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10511 OLD OLIVE ST RD
ST LOUIS, MO 63141
314-993-2660

BIRGE, CLIFFORD A IM
5535 DELMAR
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751 ST FRANCIS ST
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42 MAGNOLIA DR.
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314-B62-2552

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621 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6010

BLANKE, THOMAS J GS
1034 S. BRENTWOOD BLVD.
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BLASKIEWICZ, ROBERT J OBG
2B21 N. BALLAS ROAD
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BLOCK, ARNOLD S P
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BLOOMBERG, GORDON R PD
777 S. NEW BALLAS RD.
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10314 BRIAR HOLLOW
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BOBROW, JAMES C OPH
211 NORTH MERAMEC
ST LOUIS, MO 63105
314-721-0854

BOCK, LINDA P PD
777 S. NEW BALLAS #132W
ST. LOUIS, MO 63141
432-7343

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1035 BELLEVUE AVE
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314-644-6262

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456 N NEW BALLAS RD.
SUITE 259
ST LOUIS, MO 63131
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BOHLING, COREY A GS
2821 N. BALLAS RD.
SUITE C-40
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314-567-4575

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2B21 N BALLAS RD
ST LOUIS, MO 63131
314-B72-7141

BOLDT, THOS H IM
3394 MC KELVEY RD
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314-739-5070

BOLES, C R PD
35 N CENTRAL AVE
CLAYTON, MO 63105
314-725-9100

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11722 STUDT AVE
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2949 OLIVE
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3466 BRIDGELAND DR
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314-291-3717

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10511 OLD OLIVE ST RD
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772-1456

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ST. LOUIS, MO 63122
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BOWERSOX, WARREN A GS
319 N 1ST ST
PACIFIC, MO 63069
314-257-3500
BOWLES, G R IM
12166 OLD BIG BEND
ST LOUIS, MO 63122
314-821-9150
BOWLES, WM T U
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BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-361-2052
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4960 AUDUBON AVE
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314-727-2011
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BRANCATO, DONALD H ORS
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SUITE 102 N
ST LOUIS, MO 63136
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BRAND, EARL L GP
120 E LOCKWOOD
ST LOUIS, MO 63119
314-961-3038
BRANDWIN, LESLIE M IM
4910 FOREST PARK BLVD.
ST. LOUIS, MO 63109
314-367-2757
BRANGLE, ROBT W PTH
765 HIGH HAMPTON RD
ST LOUIS, MO 63124
314-645-8510
BRAUFMAN, HARVEY S OPH
111 CHURCH ST
FERGUSON, MO 63135
314-524-1177
BREMER, RITA F IM
3024 ORTON ST
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BRENNAN, DANL J PS
777 S NEW BALLAS RD
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5205 CHIPPEWA ST.
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ST LOUIS, MO 63109
314-726-2205
BRENNAN, ROBERT A JR OB
5376 FERBET ESTATES DR.
ST. LOUIS, MO 63128
314-351-5700
BRENNAN, ROBT A SR OBG
5205 CHIPPEWA #303
ST LOUIS, MO 63109
314-351-5700
BRENNAN, ROBT V U
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KIRKWOOD, MO 63122
314-966-4862
BRERETON, ROBT L GS
206 N CLAY AVE
KIRKWOOD, MO 63122
314-821-4300
BRICKER, EUGENE M GS
43 HIGHGATE RD
ST. LOUIS, MO 63132
BRIELMAIER, CHARLES AN
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BRIGHAM, DAVID W OPH
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6000 W FLORISSANT
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314-381-5150
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522 N. NEW BALLAS
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7346 A MANCHESTER
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314-865-4700
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ST LOUIS, MO 63141
314-872-8869
BROOKES, ROBT O P
224 SO WOODS MILL RD.
SUITE 360
CHESTERFIELD, MO 63017
314-878-7048
BROUN, GORONWY O JR IM
6359 WATERMAN AVE
ST LOUIS, MO 63130
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BROWN, BARRY O IM
35 N. CENTRAL
CLAYTON, MO 63105
BROWN, FREEMAN F III AN
218 HOLLYBERRY CT
BALLWIN, MO 63011
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BROWN, JAMES M FP
11936 BETH DR
ST LOUIS, MO 63126
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BROWN, SEYMOUR AN
2421 BAXTON WAY
CHESTERFIELD, MO 63017
BRUCE, HELEN L PH
3263 HAWTHORNE BLVD.
ST LOUIS, MO 63104
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ST LOUIS, MO 63121
314-382-6660
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950 FRANCIS PLACE
CLAYTON, MO 63105
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9349 PARKSIDE DRIVE
ST. LOUIS, MO 63144
BUCY, JAMES G U
BARNES HOSP. PLAZA
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ST LOUIS, MO 63110
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BUDD, JOHN J JR IM
9012 MANCHESTER RD
ST LOUIS, MO 63144
314-962-2170
BUETTNER, JOHN B GS
3106 QUEENY TOWERS
BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-454-2100
BURACK, HARRY O IM
1755 SOUTH GRAND BLVD.
ST. LOUIS, MO 63104
314-771-0500
BURCH, PHILLIP M PTH
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6000
BURCHARD, LUKE L FP
615 S. NEW BALLAS RD.
CREVE CEOUR, MO 63144
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ST LOUIS, MO 63104
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4949 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-367-1181
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6379 DEVONSHIRE AVE
ST LOUIS, MO 63109
314-832-2877
BURKHART, EDWARD F O
621 S NEW BALLAS RD
ST LOUIS, MO 63141
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ST LOUIS, MO 63118
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ST. LOUIS, MO 63141
BURNS, FRANCIS J CRS
6500 ELLENWOOD
ST LOUIS, MO 63105
BURNSIDE, CHAS R GP
206 W ARGONNE
KIRKWOOD, MO 63122
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11745 OLIVE ST.
ST. LOUIS, MO 63141
314-569-0720
BURST, DONALD O ORS
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ST LOUIS, MO 63109
314-647-2014
BURSTEIN, ROBT OBG
911 S BRENTWOOD BLVD
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1546 COTTON TREE DR.
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BUSSMANN, DONALD W CD
746 FAIRFIELD LAKE DRIVE
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BUTCHER, HARVEY R GS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
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BUTSCH, RICHARD H IM
901 CLAYTON RD
BALLWIN, MO 63011
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BYRUM, FRITZ A FP
650 MANCHESTER RD
BALLWIN, MO 63011
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CABBABE, EDMOND B PS
1325 S. GRAND
ST. LOUIS, MO 63104
314-771-7600
CABONCE, AUGUST L FP
6829 PARKER RD
FLORISSANT, MO 63033
314-741-1908
CABRAL, GALILEU IM
14377 WOODLAKE DR
CHESTERFIELD, MO 63017
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CACIOLO, CARLO P IM
3654 S GRAND BLVD
ST LOUIS, MO 63118
CACIOPPO, JOS E GP
1040 N MASON RD N
ST LOUIS, MO 63141
314-878-5000
CADICE, JOHN B OBG
1245 GRAHAM RD
APT 40B
FLORISSANT, MO 63031
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CAJILI, ANTONIO T IM
300 S GRAND
ST LOUIS, MO 63103
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CALCATERRA, CURT E IM
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6000
CALDWELL, NATALIE A IM
3200 S. 13TH ST.
ST. LOUIS, MO 63118
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CALLAGHAN, GERARD M OBG
1035 BELLEVUE
ST LOUIS, MO 63117
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CALLAHAN, DONALD E R
11155 DUNN RD RM 201
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CALLAHAN, JOS D CHP
22 W BRENTMOOR PARK
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8730 TEASOALE BLVO.
ST LOUIS, MO 63124
CAMEL, H M OBG
906 CHAPEL OAKS
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11636 ADMINISTRATION OR
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CANAAN, SAML A OPH
100 N. EUCLIO AVE.
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ST LOUIS, MO 63108
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CANLAS, ARSENIO L GS
11910 SACKSTON RIOGE
ST LOUIS, MO 63141
314-894-3535
CANNON, EOWARO M U
1034 BRENTWOOO BLVO
ST LOUIS, MO 63117
314-863-3800
CANTOR, HARVEY E N
11745 OLIVE ST RO
ST LOUIS, MO 63141
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*CANTOR, SOL F EM
272 GLEN HOLLOW OR.
CHESTERFIELO, MO 63017
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9903 GRAVOIS AVE
AFFTON, MO 63123
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CAPLIN, OAVIO A PS
456 NORTH NEW BALLAS RO.
ST. LOUIS, MO 63141
314-569-0130
CAROEN, JUAN O IM
11155 OUNN RO
#213 CHRISTIAN HOSP.
ST. LOUIS, MO 63136
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CARLIN, M R U
1034 S BRENTWOOO BLVO
ST LOUIS, MO 63117
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CARLSON, ARNE E GS
3466 BRIOGELANO OR
SUITE 150
BRIOGETON, MO 63044
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MERIONETH APTS. #201
20 W. MONTGOMERY AVE.
ARDMORE, PA 19003
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6248 A NOTTINGHAM AVE.
ST LOUIS, MO 63109
CARROLL, GRAYSON L U
710 SOUTH HANLEY ROAO
ST LOUIS, MO 63105
CARROLL, PERCY J GS
10341 MANCHESTER RD
ST LOUIS, MO 63122
CARRON, MICHAEL J R
2123 OAK OR.
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CARTER, EDWIN E ORS
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CREVE COEUR, MO 63141
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CARY, JOHN M IM
224 SOUTH WOOOS MILL RO.
CHESTERFIELO, MO 63017
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CASE, MARY E PTH
13001 DIETERLE LANE
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CASEY, EOWIN J OPH
4466 W PINE
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CASEY, ELIOT C PO
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CASON, ELBERT H GS
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ST LOUIS, MO 63104
314-436-5100
CASTASUS, MANUEL A GS
600 N UNION BLVO
ST LOUIS, MO 63108
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3654 S. GRANO
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ST LOUIS, MO 63139
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RICHMONO HGTS, MO 63117
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ST LOUIS, MO 63131
314-432-1212
CATANZARO, RUOOLPH E GS
8131 PAGE BLVO
ST LOUIS, MO 63130
314-429-5989
CAYABYAB, PEORO C FP
3610 S BROAOWAY
ST LOUIS, MO 63118
314-776-4683
CHACKO, RUTH IM
817 LISAKAY OR.
ST. LOUIS, MO 63122
314-231-3700
CHAOARATANA, CHALERMQUAN OBG
NORTHLANO MEOICAL BUILOING
8001 W. FLORISSANT
ST. LOUIS, MO 63136
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CHAOARATANA, PHAOUNG OTO
12666 MASON FOREST OR.,
ST. LOUIS, MO 63141
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224 S. WOOOS MILL RD #420
CHESTERFIELO, MO 63017
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7532 HIAWATHA
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2 FIELOING ROAD
ST LOUIS, MO 63124
CHARLES, FRANCOIS CO
600 N UNION
ST LOUIS, MO 63108
314-367-1828
CHARNAS, RAYMONO M IM
1040 MASON RO N
ST LOUIS, MO 63141
314-434-0772
CHAVES, RUTILLO M OBG
1410 BOBOLINK PL
ST. LOUIS, MO 63144
314-645-8510
CHAVEZ, SALVADOR GS
525 COUCH AVE.
ST. LOUIS, MO 63122
314-966-1500
CHEHVAL, MICHAEL J U
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CHESTERFIELO, MO 63017
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CHERRE, CHAS J R
2ND & 1ST CAPITAL
ST. CHARLES, MO 63301
314-946-0545
CHEUK, SHU-SUM GS
224 S. WOOOS MILL RO.
SUITE 430
CHESTERFIELO, MO 63017
314-576-0060
CHIEFFI, MARGARET J A
6744 CLAYTON RO
ST LOUIS, MO 63117
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500 NORTHWEST PLAZA
ST ANN, MO 63074
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1672 FOXLEIGH COURT
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314-996-2528
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6651 CHIPPEWA
ST. LOUIS, MO 63109
314-781-3900
CHITTULURU, VENKATA C IM
9705 WATSON RO.
ST. LOUIS, MO 63126
314-966-6111
CHIU, TAI-MAO AN
6420 CLAYTON RO
ST LOUIS, MO 63117
314-644-3000
CHO, KYU S ORS
456 N NEW BALLAS
SUITE 369
ST LOUIS, MO 63141
314-569-1830
CHOI, SAE R GS
157 SOUTH GRAESER RO
ST LOUIS, MO 63141
314-432-1212
CHOI, SEI YOUNG P
1650 BOONSLICK RO.
ST. CHARLES, MO 63301
314-946-3886
CHOU, YEN PING IM
ROBT KOCH HOSP
4101 KOCH RO
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CHUA, STEVEN IM
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CHUNOURI, KRISHNA R AN
660 S. EUCLIO AVE.
ST. LOUIS, MO 63110
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CHUNG, KAP-EUN GS
205 WEST MAIN
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3009 NO BALLAS RO.
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COSTELLO, JOS P IM
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COVA, RENO R NS
12255 DEPAUL DRIVE
BRIDGETON, MO 63044
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COVERT, RICHARO A FP
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COXE, WM S NS
4989 BARNES HOSP PLAZA
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COZART, DUANE E IM
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CHESTERFIELD, MO 63017
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CRADOCK, THOMAS V POS
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CREPPS, LOUIS F R
1269 WISPERING PINES DRIVE
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CRESPIN, STEPHEN R IM
4 MC KNIGHT LANE
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314-432-6688
CRESPO, HORACIO T FP
245 LITCHFORD CT
ST LOUIS, MO 63141
314-842-5600
CRESPO, REMEDIOS R FP
245 LITCHFORD CT
ST LOUIS, MO 63141
314-842-5600
CRISCIONE, JAMES R JR EM
4401 HAMPTON
ST. LOUIS, MO 63109
314-832-3100
CRISCIONE, JAMES R SR TS
4273 FLORA PLACE
ST LOUIS, MO 63110
314-353-1118
CRISCIONE, JAMES S AN
1837 GRASSY RIDGE
KIRKWOOD, MO 63122
314-965-7000
CUBILLO, ENRIQUE DR
730 MIDDLE POLO DR
ST LOUIS, MO 63105
314-361-1212
CUDDIHEE, ROBERT E IM
621 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6344
CUENTO, OBLENOO A GS
2425 N. BROADWAY
ST. LOUIS, MO 63102
314-241-4455
CULLUM, ALBERT G OTO
920 DORCHESTER AVE.
MIDDLESBORO, KY 40965
CUNNINGHAM, EDWIN J IM
1538 WOODLAKE DR.
CHESTERFIELD, MO 63017
314-434-3322
CUSUMANO, JOSEPH V US
36 LYNNBROOK RD.
ST. LOUIS, MO 63131
CUTLER, HAROLO M OTO
141 N MERAMEC
ST LOUIS, MO 63105
314-721-3322
CUTLER, HARRY U
4511 FOREST PARK BLVD
ST LOUIS, MO 63108
314-361-3077
CZEBRINSKI, EDWARD W IM
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127
314-821-3900
OAAKE, JOHN W JR GS
1035 BELLEVUE
SUITE 314
ST. LOUIS, MO 63117
314-644-2202
DAAKE, JOHN W SR GS
48 PORTLAND PL
ST LOUIS, MO 63108
DAGARTZIKAS, A K OBG
12902 TUNDRA
TOWN & COUNTRY, MO 63131
314-838-8000
DAHM, CHAS H JR OBG
1009 JULLANA DR
BALLWIN, MO 63011
314-865-3210
DALTON, ARTHUR R GS
35 N CENTRAL AVE
CLAYTON, MO 63105
314-726-5225
DAMES, RICHARD J IM
15 YORK DR
ST LOUIS, MO 63117
314-962-2170
DANOAMUDI, BABU R FP
6500 CHIPPEWA
SUITE 116
ST. LOUIS, MO 63109
314-832-7227
DANFORTH, WM H IM
WASHINGTON UNIVERSITY
ST LOUIS, MO 63130
314-889-5100
DANGANAN, CANDIDO S AN
2206 VIEWROYAL DR
ST LOUIS, MO 63131
314-371-3100
OANIELS, JOHN S IM
4989 BARNES HOSPITAL PLAZA
SUITE #17312
ST. LOUIS, MO 63110
314-454-3660
DANIS, PETER G PD
15022 CLAYMOOR CT.
CHESTERFIELD, MO 63017
314-872-7824
DANIS, RICHARD K PDS
1401 S GRAND
ST LOUIS, MO 63104
314-776-7700
OANKNER, ARNOLD IM
1570 WOODLAKE DR.
CHESTERFIELD, MO 63017
314-878-0996
DAS, ARABINOA N
20 SOUTH THIRD
BELLEVILLE, IL 62221
816-233-6663
DASH, IRA AN
6500 CHIPPEWA
ST LOUIS, MO 63109
314-481-6670
DASH, UDAYA N ORS
6500 CHIPPEWA ST
ST LOUIS, MO 63109
314-481-6670
OAUM, WAYNE J ORS
4960 AUDUBON AVE.
ST. LOUIS, MO 63110
314-454-5030
DAVIDSON, JOHN A IM
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63117
314-576-0933

DAVIDSON, MORRIS OTO
35 N CENTRAL AVE
CLAYTON, MO 63105
314-721-5444

DAVIS, CHARLES L JR OBG
11036 RIDGECORDE
ST LOUIS, MO 63141
816-274-3036

DAVIS, GENE L DR
11133 DUNN RD
ST LOUIS, MO 63136
314-355-6565

DAVIS, MARTIN W IM
911 S BRENTWOOD BLVD
CLAYTON, MO 63105
314-725-2100

DAVIS, MARY A P
456 N NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5707

DAVIS, SHELDON OTO
11155 DUNN RD
ST LOUIS, MO 63136
314-355-7770

DE CASTRO, EDWINO T AN
3933 SOUTH BROADWAY
ST LOUIS, MO 63118
314-865-3333

DE CASTRO, FERNANDO PD
1465 S GRAND
ST LOUIS, MO 63104
314-577-5600

DE GUERRE, RONALD K U
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-434-3433

DE JESUS, ALBERTO AN
615 S NEW BALLAS RD
ST LOUIS, MO 63141
314-872-8221

DE LEON, ROMUALDO V IM
525 JEFFCO BLVD
ARNOLD, MO 63010
314-296-3322

DE PRIEST, MICHAEL D GS
4989 BARNES HOSPITAL PLAZA
ST. LOUIS, MO 63110
314-454-2666

DE SILVA, ANANDA PD
1125 GRAHAM RD
SUITE 15
FLORISSANT, MO 63031
314-838-5700

DE UNGRIA, PABLO C OBG
6744 CLAYTON ROAD
ST LOUIS, MO 63117
314-644-6633

DE VERA, ANSON E AN
5085 REYNOSA DR
ST LOUIS, MO 63128
314-894-1371

DEBNAM, JAMES W JR R
391 MADEWOOD LANE
CHESTERFIELD, MO 63017
314-355-6565

DEETHS, TONY M DR
135 LADUEMONT DR
CREVE COEUR, MO 63141
314-567-4350

DEHNER, JONATHAN D R
26 LORENZO LANE-LA DUE
ST LOUIS, MO 63124
314-361-7373

DEITCHMAN, ROBT B P
225 SO MERAMEC
SUITE 108
CLAYTON, MO 63105
314-862-4455

DEL CARMEN, JAIME J PTH
13372 WINDBROOKE LANE
ST. LOUIS, MO 63141
314-997-4852

DEL ROSARIO, HORACIO O OM
3809 UNION BLVD
ST LOUIS, MO 63104
314-679-5165

DEL VALLE, FERNANDO P
777 S NEW BALLAS STE W
ST LOUIS, MO 63141
314-569-0811

DELCAU, CAREY M GP
3535 S JEFFERSON
ST LOUIS, MO 63118
314-772-5070

DENES, BELA U
GENITAL URINARY SURG., LTD.
11155 DUNN ROAD
ST. LOUIS, MO 63136
314-355-5544

DENK, ALAN F GS
3017 FALLBROOK
ST LOUIS, MO 63131
314-644-6300

DENNISON, CARL F FP
3908 S. GRAND
ST LOUIS, MO 63118
314-771-0045

DESHPANDE, V IM
15345 COUNTRY RIDGE DR.
CHESTERFIELD, MO 63017
314-344-6365

DESTOUET, JUDY R
WASHINGTON UNIVERSITY
510 SO KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-2291

DEUTCH, MAX PD
29 WILLOW HILL RD
ST LOUIS, MO 63124

DEVINE, JOHN B PUD
85 WILLMORE RD
ST LOUIS, MO 63109
314-351-4105

DEW, THOS A PUD
5505 DELMAR
ST LOUIS, MO 63112
314-454-1500

DEWALD, PAUL A P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
314-367-5817

DEWEIN, EDWARD G P
621 S NEW BALLAS RD RM
ST LOUIS, MO 63141
314-567-9871

DI LEO, SENATRO W OBG
34 RIDGETOP
ST. LOUIS, MO 63117

DI PASCO, DONALD J IM
#8 PORTLAND DR.
ST LOUIS, MO 63131
314-822-9400

DICECCO, CHARLES J IM
2545 DERHAKE RD.
FLORISSANT, MO 63033
314-831-6304

DICK, EARL P
7314 FOREST HAVEN ESTATES
ST LOUIS, MO 63123
314-487-0400

DICK, MARY M P
141 NO MERAMEC AVE.
SUITE 205
ST. LOUIS, MO 63105
314-725-1670

DICKLER, DONALD J AN
833 AUDUBON DR
ST LOUIS, MO 63105
314-454-7954

DIEHR, MAURICE A GS
1530 BEDFORD CT
APT 14
CHESTERFIELD, MO 63017

DIEMER, PETER A R
12302 IRONSTONE
ST LOUIS, MO 63131
314-878-4680

DIERBERG, DALE F DR
2753 AUTUMN RUN CT.
CHESTERFIELD, MO 63017
314-486-2191

DIESTELHORST, JAMES A IM
14377 WOODLAKE DR
CHESTERFIELD, MO 63017
314-878-4430

DILLARD, BURL M GS
ST. JOS.HOSP. MED. BLDG.
533 COUCH AVE.
ST. LOUIS, MO 63122
314-821-1883

DMYTRYK, EUGENE T GS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-9928

DODGE, PHILIP R CHN
DEPT OF PED. WASHINGTON UNIV
500 S KINGSHIGHWAY
ST LOUIS, MO 63178
314-454-6086

DOHRN-WEISMAN, RENATE OBG
500 NORTHWEST PLAZA
SUITE 411
ST ANN, MO 63074
314-291-3770

DOISY, PHILIP P IM
325 N KIRKWOOD RD
KIRKWOOD, MO 63122
314-822-0635

DOISY, ROBT A IM
126 E. JEFFERSON AVE.
ST. LOUIS, MO 63122
314-821-5051

DOLAN, JOHN T JR GS
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100

DONAHOE, JAMES L PD
901 CLAYTON
BALLWIN, MO 63011
314-391-6300

DONALDSON, ROBT C PS
915 N. GRAND BLVD
ST LOUIS, MO 63106
314-652-4100

DONATI, ROBT M NM
VET ADMIN HOSP NUCL MED
915 N. GRAND BLVD.
ST LOUIS, MO 63106
314-652-4100

DONLEY, LEO F GS
2425 N BROADWAY
ST LOUIS, MO 63102
314-241-4455

DONOVAN, JOHN F GS
10007 KENNERLY RD.
ST LOUIS, MO 63128
314-849-2727

DONOVAN, THOS J OTO
950 FRANCIS PLACE
SUITE 309
ST LOUIS, MO 63105
314-725-4994

DOOLEY, JOSEPH M JR N
SUITE 129W
777 S. NEW BALLAS RD.
ST LOUIS, MO 63141
314-569-2440

DORTON, ROBT K IM
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105
314-862-5252

DOUGHERTY, CHARLES H PD
3535 S JEFFERSON AVE
ST LOUIS, MO 63118
314-773-0339

DOWELL, GEO H P
3009 N BALLAS RD.
SUITE #110
ST LOUIS, MO 63131
314-567-5000

DOYLE, CHAS R GS
9053 MONMOUTH DR.
ST LOUIS, MO 63117

DRACE, CHARLES C JR GS
19 E LOCKWOOD AVE
ST LOUIS, MO 63119
314-962-3200

DRAKE, WILLIAM L JR PTH
MISSOURI BAPTIST HOSP
3015 N BALLAS RD
ST LOUIS, MO 63131
314-432-1212

DRATLER, STANLEY OBG
1110 FORT KING RD.
DADE CITY, FL 33525
904-521-4000

DRESCHER, EMMETT B GS
619 HAVERFORD RD.
ST LOUIS, MO 63124
314-725-8444

DREWS, ROBT C OPH
211 N MERAMEC
ST LOUIS, MO 63105
314-721-0854

DREY, NORMAN W IM
950 FRANCIS PL STE 205
CLAYTON, MO 63105
314-863-1211

DREYER, CARL J OBG
45 GLEN ROAD
WEBSTER GROVES, MO 63119
314-961-2981

DROZDA, JOSEPH P JR CD
12255 DEPAUL DR.
BRIDGETON, MO 63044
314-291-8824

DRUCK, NORMAN S OTO
35 N. CENTRAL AVE.
CLAYTON, MO 63105
314-721-5444

DUBUQUE, THEODORE J JR GS
1035 BELLEVUE
ST LOUIS, MO 63117
314-644-6300

DUEMLER, ROBT H OBG
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
314-821-3500

DUFFY, FRANCIS G AN
8116 UNIVERSITY DR
ST LOUIS, MO 63105
314-361-1212

DUGAS, HENRY C FP
3737 N. KINGSHIGHWAY BLVD.
ST. LOUIS, MO 63115
314-382-0477

DUGGAN, JOHN J JR OBG
533 COUCH AVENUE
ST LOUIS, MO 63122
314-822-1259

DUMADAG, VIRGILIO P PTH
3015 N BALLAS RD
ST LOUIS, MO 63131
314-432-1212

DUNN, ROBERT C JR NS
ST. LOUIS UNIV. MED. CTR.
1325 S. GRAND
ST. LOUIS, MO 63104
314-771-7600

DUREL, JUSTIN H OBG
2821 N. BALLAS RD.
ST. LOUIS, MO 63131
314-872-7400

DURR, JON W PTH
2204 WELSCH INDUSTRIAL CT.
ST LOUIS, MO 63141
314-432-1850

DUSEK, DENNIS A ORS
12615 OLD TESSON RD.
ST. LOUIS, MO 63128
314-849-0311
DUVALL, JOSEPH M O
2821 N. BALLAS
TOWN & COUNTRY, MO 63131
314-432-3033
DWYER, JAMES G IM
663 TUXEDO
ST. LOUIS, MO 63119
314-569-6000
DWYER, JOSEPH C IM
1540 WOODLAKE DR.
CHESTERFIELD, MO 63017
314-434-5562
DYER, CURTIS W FP
1409 W. 3RD ST.
MCCOOK, NE 69001
DYER, DALLAS J IM
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100
DZUNOZEV, PENCO T FP
16 HAMPTON VILLAGE PLAZA
ST LOUIS, MO 63109
314-832-2191
EACHEMPATI, RAMA G NM
6304 S. GRAND BLVD.
ST. LOUIS, MO 63111
314-353-1706
EACHEMPATI, UMA R OBG
14499 LADUE RD.
CHESTERFIELD, MO 63017
314-464-1000
EADES, JOS W PS
4910 FOREST PARK
ST LOUIS, MO 63108
314-367-5012
EAGLETON, MARK O R
1148 WEIDMAN RD
MANCHESTER, MO 63011
EAKIN, KENNETH M FP
9129 CORDOBA
ST. LOUIS, MO 63126
314-569-6010
EARP, RALPH K ORS
RR 2
MEXICO, MO 65265
EBEL, EUGENE H PO
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-838-5900
EBERLE, VINCENT L OBG
141 N MERAMEC AVE
ST LOUIS, MO 63105
314-863-2311
ECK, BIRKLE IM
1819 CAMBERLY ROAD
ST LOUIS, MO 63131
314-726-2828
ECKER, DESIDER B FP
214 N. FIRST
PACIFIC, MO 63069
ECKERT, CLARENCE T GS
2295 GULF OF MEXICO DR
LONGBOAT KEY, FL 33548
EDELE, EUGENE H FP
3890 FEDERER PL
ST LOUIS, MO 63116
314-352-3770
EDELMAN, ALAN H OR
2821 N BALLAS RD
ST LOUIS, MO 63131
314-432-5284
EDWARDS, JAMES E CHP
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-569-1770
EDWARDS, JOS C IM
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-367-3744
EGAN, ROBT C GS
1034 S. BRENTWOOD BLVD.
SUITE 776
ST LOUIS, MO 63117
314-863-6006
EGAN, THOS F R
9852 NORTHBRIDGE
ST LOUIS, MO 63124
314-434-1500
EGBEDINA, TAIWO GS
COOK COUNTY HOSPITAL
1835 W. HARRISON ST.
CHICAGO, IL 60612
312-633-6000
EGGLESTON, HARRY C OPH
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-872-8824
EGGLESTON, THOS F OPH
621 S NEW BALLAS
ST LOUIS, MO 63141
314-872-8824
EHRLICH, CARL F OTO
3009 N BALLAS RD.
SUITE 212
ST LOUIS, MO 63141
314-567-6533

EIDELMAN, JACK R P
141 N MERAMEC
ST LOUIS, MO 63105
314-862-0555
EIMER, CHAS E OTO
6 BEL AIR DRIVE
SIKESTON, MO 63801
EISEN, ARTHUR Z O
BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-454-2641
EKUNNO, JOSIAH O OBG
BOX 5340
ST. LOUIS, MO 63115
314-385-9904
ELCOCK, DEVERA M FP
615 S. NEW BALLAS RD.
CREVE COEUR, MO 63141
314-569-6090
ELDER, DONALD G FP
2202 S 12TH. STREET
ST. LOUIS, MO 63104
314-772-8348
ELIASSON, SVEN G N
660 S EUCLID
ST LOUIS, MO 63110
314-454-2385
ELLER, CHAS H PH
250 E ALAMEDA
SANTA FE, NM 87501
ELLERSIECK, DOROTHY M FP
10437 EWELL
ST LOUIS, MO 63137
ELLSASSER, JAMES C ORS
1034 BRENTWOOD BLVD
ST LOUIS, MO 63117
314-725-0881
EMERAN, GEORGE J U
600 NORTH UNION
ST LOUIS, MO 63108
314-367-1828
EMERSON, DANIEL P EM
615 S. NEW BALLAS RD.
CREVE COUER, MO 63141
314-569-6090
EMERSON, REYNOLDS L FP
1695 BRENTWOOD BLVD
BRENTWOOD, MO 63144
314-961-6387
EMERSON, WILLIAM A IM
11150 DUNN RD STE 105
ST LOUIS, MO 63136
314-355-5597
EPSTEIN, JAMES M IM
ST. LOUIS MEDICAL CLINIC
3009 NO. BALLAS RD.
ST LOUIS, MO 63131
314-432-1111
ERNST, EDWIN C III OR
12457 BALWYCK
ST. LOUIS, MO 63131
314-878-4680
ERNST, EDWIN C JR R
14377 WOODLAKE DR
SUITE 110
CHESTERFIELD, MO 63017
314-291-6160
ERNST, JOS G IM
325 N KIRKWOOD RD
KIRKWOOD, MO 63122
314-966-7265
ERNST, RICHARD E R
14377 WOODLAKE DR
SUITE 110
CHESTERFIELD, MO 63017
314-878-4680
ERNST, ROLAND P R
12327 CREEKHAVEN
ST LOUIS, MO 63131
314-878-4680
ESCOBEDO, BOLIVAR M OBG
13975 MANCHESTER ROAD
MANCHESTER, MO 63011
314-394-6070
ESCOFFERY, RICHARD F OPH
EAST PAVILION SUITE 17413
4949 BARNES HOSPITAL
ST LOUIS, MO 63110
314-367-1181
ESSLINGER, ARTHUR T OBG
816 IDLEWILD WAY
SIESTA KEY
SARASOTA, FL 33581
ESTHER, JAMES H IM
3009 N BALLAS SUITE 100
ST. LOUIS, MO 63131
314-432-1111
ESTRADA, CORAZON O IM
11155 DUNN RD
ROOM 104
ST LOUIS, MO 63136
314-355-0060
ESTRADA, JESUS I FP
1610 MASON RD.
ST LOUIS, MO 63131
314-355-0060
ETHEREDGE, EDWARD E GS
WASH UNIV DEPT SURG
4989 BARNES HOSP PLZ
ST LOUIS, MO 63110
314-454-3081

ETIENNE, ROBT B IM
6000 WESTMINSTER
ST LOUIS, MO 63112
314-721-4499
ETO, JACKSON K PO
6651 CHIPPEWA ST
ST LOUIS, MO 63109
314-644-2727
EVANS, LAWRENCE G JR ORS
1325 S GRAND
ST LOUIS, MO 63104
314-771-7643
EVENS, RONALD G R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-367-2131
EVERSOLL, NORTON J OS
1455 TYLER ST
HOLLYWOOD, FL 33020
EXARHOU, KLARK GS
777 S NEW BALLAS ROAD
ST LOUIS, MO 63141
314-432-2811
EYERMAN, EDWARD L N
1035 BELLEVUE AVE
SUITE 304
ST LOUIS, MO 63117
314-644-7177
FABIAN, LEONARD W AN
660 S EUCLID
ST LOUIS, MO 63110
314-454-2858
FABITO, DANIEL C GS
3009 N. BALLAS RD.
SUITE 202
ST. LOUIS, MO 63131
314-872-8345
FABITO, MELINDA A IM
P. O. BOX 446
#8 VILLAGE CENTER
EUREKA, MO 63025
314-938-4956
FAIR, WM R U
4960 AUDUBON
ST LOUIS, MO 63110
314-454-3701
FALLON, RICHARD H GS
4949 BARNES HOSP PLAZA
STE 16306
ST LOUIS, MO 63110
314-454-5103
FARBERMAN, ELLIOTT PO
437 FALAISE DR
CREVE COEUR, MO 63141
314-921-4500
FARRELL, JOHN S IM
12255 DEPAUL DR.
BRIDGETON, MO 63044
314-291-8824
FARRELL, ROBT J IM
9060 SARANAC DR
ST LOUIS, MO 63117
FARZANA, FARIDA P
6 WEDGEWOOD LN
ST LOUIS, MO 63141
314-644-8326
FATHMAN, ANTHONY E U
224 S. WOODS MILL RD.
SUITE 510
CHESTERFIELD, MO 63017
314-434-3433
FEHRENBACHER, KIM A FP
615 SO. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6010
FEIBEL, ROBT M OPH
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-727-6716
FEIT, ROBERT M U
6500 CHIPPEWA ST.
ST. LOUIS, MO 63109
314-351-0155
FELDMAN, DAVID IM
11501 LAKESHORE DR
ST LOUIS, MO 63141
314-569-2611
FELDMAN, MARK R OBG
1040 N. MASON RD.
ST. LOUIS, MO 63141
314-434-6020
FELICIANO, WILFRIDO C PS
11155 DUNN RD.
SUITE 202E
ST. LOUIS, MO 63136
314-838-7777
FELIX, ROBT H P
10501 INDIAN WELLS DR
SUN CITY, AZ 85351
FELLER, HAROLD H FP
NORTHLAND MD BLD ST 201
ST LOUIS, MO 63136
314-382-3334
FELLHAUER, CARL M ORS
1035 BELLEVUE
RICHMOND HEIGHT, MO 63117
314-645-5990
FELTS, JAMES A AN
45 BERRY RD PARK
ST LOUIS, MO 63122
314-454-2858

FERGUSON, THOS B 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110 314-361-0122	COS
FERREIRA, VICTOR H 50 WAVERTON OR. LAOUE, MO 63124 314-991-4591	PTH
FERRENOELLI, JAMES A 660 S EUCLIO ST LOUIS, MO 63110 314-454-2385	N
FERRIGNI, FILIPPO J THIRO STREET & FIRST CAPITOL ST. CHARLES, MO 63301 314-946-6811	IM
FERRIS, CHARLES W JR 31 REINKE RO. ELLISVILLE, MO 63011 314-432-1212	PTH
FERRY, RICHARO J 141 MERAMEC ST CLAYTON, MO 63105 314-726-3202	N
FIGUEROA, EOOUYN 77 WEST PORT PLAZA SUITE 359 ST LOUIS, MO 63141 314-434-6260	CHP
FIGUEROA, ELISEO O 11155 OUNN RO ST LOUIS, MO 63136 314-355-2180	IM
FINGERHOOO, MARVIN G 1195 CIMARON OR ST LOUIS, MO 63132	IM
FINGERT, HYMAN H 4542 MARYLANO AVE. ST LOUIS, MO 63108 314-367-6623	P
FINK, LEROY L 11155 OUNN RO STE 206 ST LOUIS, MO 63136 314-741-3400	GS
FINKEL, BARNEY W 6508 W FLORISSANT ST LOUIS, MO 63136 314-385-7500	FP
FINN, MURRAY E 1035 BELLEVUE STE 202 ST LOUIS, MO 63117 314-644-6200	P
FINNEGAN, JOS V 1035 BELLEVUE ST ST LOUIS, MO 63117 314-644-6444	IM
FIOROELISI, ROCCO J 700 HAVERFORO RO ST LOUIS, MO 63124 314-644-4220	GS
FISCHBEIN, LEWIS C 4949 BARNES HOSP. PLAZA SUITE #16422 ST. LOUIS, MO 63110 314-367-9595	RHU
FISCHER, JOHN R 12255 OEPAUL OR BRIOGETON, MO 63044 314-291-2500	P
FISCHER, ROBERT 533 COUCH AVE ST. LOUIS, MO 63122 314-966-0500	IM
FISH, RICHARO G 4370 FOREST OE VILLE OR ST LOUIS, MO 63129	OPH
FISH, VIRGIL O 2500 TOWN & COUNTRY LA. ST LOUIS, MO 63131 314-721-5488	GS
FISHER, LINOA 5535 DELMAR ST LOUIS, MO 63112 314-361-1212	IM
FISHMAN, JOHN J 3015 N BALLAS RO ST LOUIS, MO 63131 314-569-5188	AN
FISHMAN, NORMAN 777 S NEW BALLAS RO. ST. LOUIS, MO 63141 314-569-1322	IM
FITZGERALO, LEO P BETHESDA HOME 9645 BIG BENO ST LOUIS, MO 63122	OBG
FITZGERALO, WM T 3915 WATSON RD ST LOUIS, MO 63109 314-644-7100	IM
FIVIAN, GERALD J 2821 N BALLAS RD ST LOUIS, MO 63131 314-432-2655	OPH
FLANCE, ISRAEL J 4652 MARYLANO ST LOUIS, MO 63108 314-267-3113	PUO
FLANIGAN, GEO D 100 N EUCLIO AVE. SUITE 902 ST LOUIS, MO 63108 314-361-3060	OBG
FLEISCHMAN, JAY A 3655 VISTA AVE ST. LOUIS, MO 63110 314-772-9200	OPH
FLEISHMAN, ALFREO APT#106 920 GUELBRETH LANE ST LOUIS, MO 63141	IM
FLETES, JAMES W 7270 NATURAL BRIOGE AVE ST LOUIS, MO 63121 314-383-2156	FP
FLIESHER, EOWARO B 9966 COOOINGTON WAY ST. LOUIS, MO 63132 314-991-0652	PO
FLORENCE, KERRY E 329 S. PLUM CARLINVILLE, IL 62626	FP
FLORES, JHONSON E 12129 COUNTRY MANOR ST. LOUIS, MO 63141 314-434-1500	AN
FLORES-VEGA, CARLOS H 3915 WATSON RO ST LOUIS, MO 63109 314-644-7100	IM
FLORO, KENNETH E JR. 6421 LYNBROOK AFFTON, MO 63123 314-644-2202	GS
FLORO, MARIANO N 11115 NEW HALLS FERRY R FLORISSANT, MO 63033 314-838-5600	GS
FLOTTE, BERNARO H 6 LILA LANE FLORISSANT, MO 63033	IM
FLOTTE, SYLVESTER A 466 RUNNYMEOE OR ST LOUIS, MO 63141 314-837-1130	IM
FLUG, ERIC J 533 COUCH KIRKWOOO, MO 63122 314-966-3324	PO
FLYNN, EOWARD P 9730 E WATSON RO ST LOUIS, MO 63126 314-843-7000	IM
FLYNN, JOHN T 3211 S GRANO BLVO ST LOUIS, MO 63118 314-771-2078	FP
FLYNN, JOS E 621 S NEW BALLAS ST LOUIS, MO 63141 314-872-8386	GS
FLYNN, THOMAS T 10007 KENNERLY ROAO ST LOUIS, MO 63128 314-849-1557	P
FOGARTY, WILLIAM M JR 3915 WATSON RO ST LOUIS, MO 63109 314-644-7100	IM
FORO, LEE T WASHINGTON UNIVERSITY 4960 AUOUBON ST LOUIS, MO 63110 314-454-2724	ORS
FORO, THOMAS E APT 602 316 N. GREEN BAY RO. WAUKEGAN, IL 60085	OPH
FORKIN, MARY P 615 S. NEW BALLAS RO. ST. LOUIS, MO 63141 569-6000	FP
FORSMAN, WALOO W 9436 GRAVOIS ST LOUIS, MO 63123 314-631-2421	IM
FORSYTH, B. TOOO 100 N EUCLIO ST LOUIS, MO 63108 314-367-8811	IM
FORTI, JOHN J 1434 CHAMBERS ST LOUIS, MO 63135 314-429-0859	FP
FOX, LEON J 903 SO. WARSON RO. ST LOUIS, MO 63124	ORS
FOX, ROBT E 6744 CLAYTON RO ST LOUIS, MO 63117 314-645-8050	IM
FRANCISCO, DOMINIC S 777 S NEW 8ALLAS RO ST LOUIS, MO 63141 314-567-4350	R
FRANCOIS, RODRIGUE J 625 N. GRAND ST. LOUIS, MO 63103 314-531-9416	OPH
FRANKLIN, HAROLO A 16 HAMPTON VILLAGE PLAZA ST LOUIS, MO 63109 314-752-4600	IM
FRANKLIN, MAX S 585 COEUR OE ROYALE ST LOUIS, MO 63141	CO
FRASER, OANL M 1035 8ELLEVUE AVE ST LOUIS, MO 63117 314-644-6300	TS
FRAWLEY, THOS F OFF GRAO. MEO. EOUCATION 615 S. NEW BALLAS RO. ST. LOUIS, MO 63141 314-569-6934	IM
FREOERICK, RAYMONO O SUITE #305 4511 FOREST PARK ST. LOUIS, MO 63108 314-631-1139	GS
FREEOMAN, RUTH S 10287 CLAYTON ROAO ST LOUIS, MO 63124 314-991-1172	OPH
FREEL, JAMES H 1325 S. GRANO 8LVD. ST. LOUIS, MO 63104 314-776-8100	OBG
FREEMAN, CARY H 8225 FLORISSANT RO. ST. LOUIS, MO 63121 314-521-5129	OPH
FREIMAN, S. MICHAEL 1034 S. BRENTWOOO #616 ST LOUIS, MO 63117 314-727-4333	OBG
FRIEOMAN, IRA J 2428 WOOOSON RO OVERLAND, MO 63114 314-427-2424	PO
FRIEOMAN, PAUL L 7332 CORNELL ST LOUIS, MO 63130 314-768-8300	AN
FRIEOMAN, RO8T H 2821 N BALLAS RO ST LOUIS, MO 63131 314-432-8602	PO
FRIEOMAN, WILLIAM H 1325 SOUTH GRANO BLVO. 2NO FLOOR ST. LOUIS, MO 63104 314-771-8887	OTO
FRIEDRICH, ANTHONY P 12303 OEPAUL OR BRIOGETON, MO 63044 314-344-6360	EM
FRIEORICH, ERNST R 4911 BARNES HOSP PLAZA ST LOUIS, MO 63110 314-454-2330	O8G
FRIES, ARMANO O 11 W GEYER LN ST LOUIS, MO 63131 314-842-5600	OTO
FRIES, JOHN W 10010 KENNERLY ROAO ST LOUIS, MO 63128 314-842-5600	R
FRISKEL, ARTHUR K 7500 OEVONSHIRE ST LOUIS, MO 63119 314-647-0445	IM
FRUMSON, GUY H 12255 OEPAUL OR BRIOGETON, MO 63044 314-739-7654	ORS
FRY, ROBERT O 456 N. NEW BALLAS RO. ST. LOUIS, MO 63141 314-569-0130	GS
FUENTES, FE P 14645 OAK ORCHARO CT. CHESTERFIELO, MO 63017 314-351-7300	OPH
FUJITA, MILTON T 12161 POINT OAK RO ST LOUIS, MO 63131 314-644-8001	CHP
FULEIHAN, FARIO M 621 S NEW BALLAS ST LOUIS, MO 63141 314-569-6296	U
FUNSCH, ROBERT E 6744 CLAYTON RO ST LOUIS, MO 63117 314-645-4600	ORS
FURLA, GUS J 57 BROADVIEW OR ST LOUIS, MO 63105 314-961-9560	FP
GA8RAWY, LAILA G 1040 N. MASON RO. CREVE COEUR, MO 63141 314-434-2518	OPH
GADO, MOKHTAR H 510 S. KINGSHIGHWAY ST. LOUIS, MO 63110 314-454-2981	N

GAGLIARDO, JOSEPH P
141 N MERAMEC RM 303
CLAYTON, MO 63105
314-726-5390
GALAKATOS, ANDREW E OBG
777 S NEW BALLAS ROAD
ST LOUIS, MO 63141
314-569-0055
GALAN, ALEJANDRO A GS
12255 DE PAUL DR. SUITE 160
BRIDGETON, MO 63044
314-291-3781
GALE, ARTHUR H IM
2428 WOODSON RD
OVERLAND, MO 63114
314-427-2424
GALL, IRA C OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5016
GALSTER, ALLEN D GS
660 S. EUCLID
ST. LOUIS, MO 63110
314-454-2935
GANDLMAYR, JACOB M FP
1040 N MASON RD
ST LOUIS, MO 63141
314-434-7400
GANSLOSER, WILBERT M P
950 FRANICS PL
CLAYTON, MO 63105
314-727-0076
GANTNER, GEO E JR PTH
1325 S GRAND BLVD
ST LOUIS, MO 63104
314-664-9800
GANTZ, JOHN A NM
10 MUIRFIELD LANE
ST LOUIS, MO 63141
314-768-8276
GARCIA, FLORENTINE U PD
2601 NORTH WHITTIER ST
ST LOUIS, MO 63113
314-622-5355
GARCIA-FERRER, EDUARDO A P
777 S. NEW BALLAS
ST LOUIS, MO 63141
314-567-5011
GARFINKEL, BERNARD T IM
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-567-1902
GARRETT, JOHN IM
4570 AUDUBON ST.
ST. LOUIS, MO 63110
314-534-8220
GARRIGA, FRANCISCO J IM
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-921-4420
GAVINI, RAJENDRA R GS
6500 CHIPPEWA STREET
SUITE 125
ST LOUIS, MO 63109
314-481-6670
GEARHART, DAVID L OBG
456 N. NEW BALLAS RD
ST LOUIS, MO 63141
314-569-2022
GEARHART, WILBUR H P
3009 N. BALLAS RD.
SUITE 110
ST LOUIS, MO 63131
314-567-5000
GEDNEY, WM B IM
806 MERAMEC STATION RD
VALLEY PARK, MO 63088
314-825-2423
GEEKIE, ROBERT C III IM
653 S NEW BALLAS RD.
APT. B2D
ST. LOUIS, MO 63141
314-569-6000
GEISE, AUGUST W NS
5505 DELMAR
ST LOUIS, MO 63112
314-367-8787
GEISSE, GUILLERMO R
DEPT OF RADIOLOGY
6150 OAKLAND
ST LOUIS, MO 63139
314-645-8505
GELLMAN, ELLIOT F PD
456 N NEW BALLAS RD
ST LOUIS, MO 63141
314-872-8662
GENNAOUI, JAD M OR
12660 LAMPLIGHTER SQ.
SUITE C
ST. LOUIS, MO 63128
314-842-3560
GENTSCH, KENNETH W CO
ST. LOUIS MEDICAL CLINIC
3009 N. BALLAS RD.
ST LOUIS, MO 63131
GEORGE, PHILIP G ORS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63105
314-721-7325
GERMUTH, FREDERICK G PTH
615 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-6500
GEROWIN, LANCE GS
9408 W MILTON
ST LOUIS, MO 63114
314-427-4616
GERST, ALOYSIUS C PD
11115 NEW HALLS FERRY
FLORISSANT, MO 63033
314-837-2808
GERST, JAMES PD
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
GHOSH, NELLIE CO
GRANT MEDICAL CLINIC
114 NO. TAYLOR AVE.
ST. LOUIS, MO 63108
314-534-8600
GIESELMAN, RALPH V IM
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-878-6260
GILDEN, JEROME J ORS
456 N. NEW BALLAS RD.
SUITE 369
ST LOUIS, MO 63141
314-569-1830
GILLESPIE, WILLIAM J TS
621 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-1010
GILPIN, DORIS C CHP
7452 AMHERST AVE
ST LOUIS, MO 63130
314-993-2418
GILULA, LOUIS A DR
250 DIELMAN RD
ST LOUIS, MO 63124
314-454-2191
GINSBURG, JORDAN H ORS
456 N NEW BALLAS ROAD
SUITE 369
ST LOUIS, MO 63141
314-569-1830
GINTHER, JAMES W JR IM
9616 LACKLAND
OVERLAND, MO 63114
314-427-1855
GIRAPARNONT, BANG-ORN OBG
CHRISTIAN HOSP NORTHWEST
1225 GRAHAM RD
FLORISSANT, MO 63031
314-839-3800
GIRAPARNONT, PRABHAK IM
12845 GLENBERNIE
ST LOUIS, MO 63141
314-355-2300
GLADNEY, JOHN H OTO
100 N EUCLID AVE-STE 70
ST LOUIS, MO 63108
314-361-8300
GLASSMAN, A. DANIEL IM
950 FRANCIS PLACE
ST. LOUIS, MO 63105
726-6512
GLAZER, HARVEY S DR
MALLINCRODT INST. OF RAD.
510 S. KINGSHIGHWAY BLV
ST. LOUIS, MO 63110
314-454-2000
GLINES, MICHAEL H PD
12 MERAMEC HGTS SHOPPING CTR
ARNOLD, MO 63010
314-296-4466
GLOGOVAC, S. VIC ORS
SUITE #360
12255 DEPAUL DR.
BRIDGETON, MO 63044
314-291-7181
GNADE, ALBERT J GS
3606 GRAVOIS AVE
ST LOUIS, MO 63116
314-772-7380
GOEBEL, JOAN M AN
5128 JAMIESON
ST LOUIS, MO 63119
GOLD, JONATHAN A NS
12255 DEPAUL DRIVE
SUITE 830
BRIDGETON, MO 63044
314-291-6556
GOLDFARB, ALVIN GS
514 COEUR DE ROYALE DR
#405
ST LOUIS, MO 63141
314-569-0130
GOLDGABER, ALBERTO IM
8631 DELMAR #303
ST LOUIS, MO 63124
314-991-5717
GOLDMAN, ARNOLD M IM
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-567-1902
GOLDMAN, GORDON M OBG
77 WESTPORT PLAZA
SUITE 265
ST. LOUIS, MO 63141
314-878-7333
GOLDMAN, HYMEN J D
100 N. EUCLID
ST LOUIS, MO 63108
314-361-1330
GOLDMAN, MELVIN L IM
8631 DELMAR
ST LOUIS, MO 63124
314-993-2400
GOLDRING, DAVID PDC
500 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-6000
GOLDRING, SIDNEY NS
660 S EUCLID
ST LOUIS, MO 63110
314-454-3274
GOLDSTEIN, BENJAMIN IM
2428 WOODSON RD
ST LOUIS, MO 63114
314-427-2424
GOLDSTEIN, MARCY A PS
950 FRANCIS PLACE
CLAYTON, MO 63105
314-725-9105
GOLLUB, SAML W PD
539 COEUR DE ROYALE
ST LOUIS, MO 63141
314-367-5820
GOLTSCHMAN, JOHN P OPH
14377 WOODLAKE DR
CHESTERFIELD, MO 63017
314-576-6456
GOMEZ, CESAR A GS
3009 NORTH BALLAS RD.
SUITE 114
ST LOUIS, MO 63131
314-569-2333
GONZALEZ, ALICIA D P
2821 N BALLAS RD.
ST. LOUIS, MO 63131
314-432-7375
GOODMAN, NATHANIEL FP
#9 SCARSDALE LANE
ST LOUIS, MO 63117
GORAN, DAVID A IM
7171 DELMAR BLVD.
UNIVERSITY CITY, MO 63130
314-863-0033
GORDON, JAMES M OPH
11155 DUNN RD
ST LOUIS, MO 63136
314-355-7300
GORLA, WAYNE O IM
27 HARNEYWOLD
ST LOUIS, MO 63136
314-355-2300
GORMAN, JOHN C IM
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-878-7220
GOULD, RONALD J GE
1035 BELLEVUE AVE.
RICHMOND HTS., MO 63017
314-645-1344
GRADY, RONALD K IM
224 S. WOODS MILL RD. #370
CHESTERFIELD, MO 63017
314-878-2467
GRAFF, RALPH J GS
P O BOX 14109
ST LOUIS, MO 63177
314-367-8060
GRAGNANI, JOHN A PM
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6041
GRAND, M. GILBERT OPH
EAST PAVILION SUITE 17413
4949 BARNES HOSP. PLAZA
ST. LOUIS, MO 63110
314-367-1181
GRANETO, JOS A FP
5521 S BROADWAY
ST LOUIS, MO 63111
314-353-1911
GRANT, JOHN M IM
GRANT MEDICAL CLINIC
114 N. TAYLOR AVE.
ST LOUIS, MO 63108
314-534-8600
GRANT, NEVILLE IM
GRANT MEDICAL CLINIC
114 N. TAYLOR AVE.
ST LOUIS, MO 63108
314-534-8600
GRANT, SAML B IM
96 ABERDEEN PL
ST LOUIS, MO 63105
GRAUL, WALTER P ORS
4944 LINDELL BLVD.
ST. LOUIS, MO 63108
GRAVISS, EDWARD R R
1465 S. GRAND
ST. LOUIS, MO 63104
314-865-4000
GRAY, GARY J IM
911 S BRENTWOOD
ST LOUIS, MO 63105
314-727-5336

GREEN, MORTON R OPH
111 W. LINCOLN
BELLEVILLE, IL 62221
618-234-1774
GREEN, WM R FP
7200 MANCHESTER
ST LOUIS, MO 63143
314-645-7744
GREENMAN, MARSHALL B PD
777 S NEW BALLAS RO
ST LOUIS, MO 63141
314-872-8752
GREGORY, JOHN G U
1325 S GRANO
ST LOUIS, MO 63104
314-771-7600
GRESICK, ROBT J PTH
11 COACH-N-FOUR LANE
ST LOUIS, MO 63131
GRIEGE, CHAS W CO
493 ST FRANCOIS
FLORISSANT, MO 63031
314-831-8600
GRIGGS, JAMES Y GS
1034 S. BRENTWOOO
SUITE #776
ST LOUIS, MO 63117
314-863-6006
GRONEMEYER, PAMELLA S PTH
ST. ELIZABETH MEO CTR.
2100 MAOISON AVE.
GRANITE CITY, IL 62040
618-798-3504
GRUBB, ROBT L NS
BARNES HOSP NEUROSURGER
4901 BARNES HOSP PLZ
ST LOUIS, MO 63110
314-454-3274
GRUNDMANN, WM H ORS
12028 ROSEVALLEY LANE
ST LOUIS, MO 63138
314-721-1700
GULICK, C. RICHARD OBG
1034 S BRENTWOOO
ST LOUIS, MO 63117
314-725-9300
GULICK, CHARLES R OBG
1034 S BRENTWOOD BLVO
ST LOUIS, MO 63117
314-725-9300
GUMMELS, BELMONT B FP
718 FLORENCE AVE
ST LOUIS, MO 63119
GUNAWARDHANA, H P P
2120 MAOISON AVE.
GRANITE CITY, IL 62040
618-876-5500
GUNN, WALTER T FP
4617 DAHILA AVE
ST LOUIS, MO 63116
314-752-2120
GUPTA, JITENORA K IM
14377 WOODLAKE #101
CHESTERFIELO, MO 63017
314-434-7475
GUPTA, NARAYAN C FP
6331 OEVONSHIRE
ST LOUIS, MO 63109
314-771-7388
GURSAHANI, MOHAN U
1034 S 8RENTWOOD BLVD
STE 854
ST LOUIS, MO 63117
314-863-3800
GURSAHANI, PUSHPA PO
#1 HUNTLEIGH OOWNS
ST. LOUIS, MO 63131
GUTIERREZ-MEOINA, ERNESTO IM
525 ST. FRANCOIS
FLORISSANT, MO 63031
837-3721
GUTWEIN, MICHAEL B IM
3009 NORTH BALLAS RD.
SUITE 100
ST. LOUIS, MO 63131
314-432-1111
GUZE, SAML B P
4940 AUDUBON AVE
ST LOUIS, MO 63110
314-454-3875
HOECKER, JAY L PD
3535 S. JEFFERSON
ST. LOUIS, MO 63118
314-773-0339
HABERT, EOWARD R R
10010 KENNERLY
ST LOUIS, MO 63128
314-842-5600
HADDOCK, JAMES N P
777 S NEW 8ALLAS RD
ST LOUIS, MO 63141
314-567-3740
HAFFNER, HEINZ E GS
3 LINDWORTH
ST LOUIS, MO 63124
HAGAN, DANL J R
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-6031

HAGEBUSCH, OMER E PTH
15201 OLIVE ST RO APT 3
CHESTERFIELO, MO 63017
HAGEMANN, PAUL O IM
224 S. WOOOS MILL RO.
CHESTERFIELD, MO 63017
314-878-7220
HAGEN, OUANE Q P
621 S NEW BALLAS RO
ST LOUIS, MO 63141
314-569-6295
HAGEN, GARRETT A IM
1035 BELLEVUE
RICHMONO HGHTS, MO 63117
314-645-3400
HAHN, YORAM OBG
1035 BELLEVUE AVENUE
SUITE 318
ST. LOUIS, MO 63117
314-644-3288
HALFORO, RICHARO PS
1040 N MASON RO STE 109
ST LOUIS, MO 63141
314-878-4530
HALL, EUGENE W FP
116A S FLORISSANT RO
FERGUSON, MO 63135
314-521-0907
HALL, LEE A OBG
3716 HULEN PARK
FORT WORTH, TX 76109
817-336-9371
HALL, PRESTON C FP
39 WOOOCREST OR
ST LOUIS, MO 63124
HALL, ROBT A FP
43 WASHINGTON TERR.
ST LOUIS, MO 63112
314-773-7646
HALL, WM K O
P O BOX 661
ST CHARLES, MO 63301
314-946-7608
HALLAZGO, SANTIAGO Y FP
11140 MANCHESTER RO
ST LOUIS, MO 63122
314-821-1414
HALLEY, R H U
11155 OUNN RD STE 214
ST LOUIS, MO 63136
314-355-5544
HALLINGER, EARL S O
2209 KIPP COURT
ST. LOUIS CO., MO 63136
HALLORAN, MARK J IM
621 S NEW BALLAS RO
ST LOUIS, MO 63141
314-432-3456
HALVERSON, JOHN O GS
4960 AUDUBON
ST LOUIS, MO 63110
314-454-2217
HAMILTON, CALOWELL K PO
11745 OLIVE ST RO
CREVE COEUR, MO 63141
314-562-1090
HAMILTON, EUGENE G OBG
BELLEVUE BLDG
1035 BELLEVUE
ST LOUIS, MO 63117
314-781-3838
HAMILTON, JOHN A OBG
1035 BELLEVUE AVENUE
ST LOUIS, MO 63117
314-781-3838
HAMILTON, THOMAS R IG
TRUMAN MEO CTR. MICRO OIV
2301 HOLMES ST.
KANSAS CITY, MO 64108
816-566-3585
HAMILTON, WILLIAM P CD
615 S NEW BALLAS ROAO
ST LOUIS, MO 63141
314-569-6168
HAMMERMAN, ALBERT M OR
216 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-7230
HAMMERMAN, HARLEY J OR
#6 JUNGERMAN CIRCLE
ST. PETERS, MO 63376
314-441-6730
HAMMERMAN, MARC R IM
660 S. EUCLID AVE.
ST. LOUIS, MO 63110
314-454-2968
HAMMOND, D. WADE ORS.
533 COUCH AVE.
SUITE 220
ST LOUIS, MO 63122
314-966-0111
HAMMOND, DAVID T CD
ST. LOUIS MEDICAL CLINIC
3009 N. BALLS RO.
ST LOUIS, MO 63131
314-432-1111
HAMPTON, STANLEY F A
93 LAKE FOREST
ST LOUIS, MO 63117
314-781-6808

HANAWAY, JOS N
ROOM 510 100 N. EUCLIO
ST LOUIS, MO 63108
314-454-1962
HANES, LILY A TR
1323 SOUTHEAST 17TH. ST.
FT. LAUDEROALE, FL 33316
HANISH, SIONEY J OPH
950 FRANCIS PLACE
SUITE 302
CLAYTON, MO 63105
314-726-5008
HANLEY, THOMAS P OBG
1035 BELLEVUE
ST. LOUIS, MO 63117
314-644-6262
HANNA, FAYEZ A FP
3394 MC KELVEY
BRIOGETON, MO 63044
314-291-6900
HANS, OSVALDO ENT
1325 S. GRANO
ST. LOUIS, MO 63104
314-771-7600
HANSER, THEODORE H GS
3555 SUNSET OFFICE OR
ST LOUIS, MO 63127
314-821-3900
HANSON, PAUL R OM
1111 WOOOS MILL RO
BALLWIN, MO 63011
314-391-4052
HANTMAN, STEPHEN L IM
1125 GRAHAM RD
FLORISSANT, MO 63031
314-838-5700
HANTZ, OSCAR OTO
77 W PORT PLAZA
ST. LOUIS, MO 63141
314-878-9089
HAROIN, WM B N
3009 NO BALLAS RO.
SUITE 209
ST LOUIS, MO 63131
314-567-3663
HAROY, OAVIO A U
911 S BRENTWOOO BLVO
ST LOUIS, MO 63105
314-725-6551
HARDY, OAVIO C R
718 CYPRESS CR.
FAIRFIELO, CA 94533
HARDY, GUEROAN OTO
35 N CENTRAL AVE
CLAYTON, MO 63105
314-725-7221
HAROY, PATRICK J IM
1125 GRAHAM RO
FLORISSANT, MO 63031
314-838-5700
HARELL, ALEX ORS
8 MEOIC CTR 1040 N. MASON
ST LOUIS, MO 63141
314-878-1010
HARFORO, CARL G IM
WASH U SCH MEO-INT MEO-
660 S. EUCLIO AVE.
ST LOUIS, MO 63110
314-454-2229
HARKINS, WM B OTO
275 UNION BLVO.
APT. 920
ST LOUIS, MO 63108
HARPER, FLEMING 8 GS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-454-2111
HARRISON, LEE B IM
44 RIOGEMOOR OR
CLAYTON, MO 63105
HARRISON, RICHARO L P
9705 WATSON RD
CRESTWOOO, MO 63126
314-821-2737
HARSHMAN, DAVID M IM
SUITE 319 3535 S. JEFFERSON
ST. LOUIS, MO 63118
314-771-1691
HART, WILLIAM OPH
660 SOUTH EUCLIO
ST LOUIS, MO 63110
314-454-3104
HART, WILLIAM G PS
777 S. NEW BALLAS RO.
ST. LOUIS, MO 63141
314-567-3737
HARTMAN, PAUL T P
1034 S BRENTWOOD 8LVD
ST LOUIS, MO 63117
HARTMAN, RICHARD A O8G
4021 CONNECTICUT
ST. LOUIS, MO 63116
314-454-7834
HARTNETT, THOS D P
11 S MERAMEC
ST LOUIS, MO 63105
314-727-7700
HARTSTEIN, JACK OPH
8631 DELMAR BLVD
ST LOUIS, MO 63124
314-991-2667

HARTWIG, JOHN A FP
12541 POSTGROVE DR
ST LOUIS, MO 63141

HARWELL, JAMES L PO
35 N CENTRAL
ST LOUIS, MO 63105
314-721-2262

HASENMUELLER, JAMES J GS
10004 KENNERLY RO
SUITE 110
ST LOUIS, MO 63128
314-842-1B90

HATFALVI, BELA I AN
15 MIODLESEX DR
ST LOUIS, MO 63144

HAWATMEH, IBRAHIM S U
1325 S GRAND
ST LOUIS, MO 63104
314-771-7600

HAWK, BRAY O GS
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
314-4B1-3833

HAWK, THOMAS M ORS
6500 CHIPPEWA
ST. LOUIS, MO 63109
314-352-2507

HAWKER, WM O OBG
77 WILLMORE RD
ST LOUIS, MO 63109

HAWKINS, GEO L NS
504 OAKWOOO
ST LOUIS, MO 63119

HAYEK, WESLEY E GS
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-838-5600

HAYNES, JAMES W PTH
1 IVANHOE WOODS
KIRKWOOO, MO 63122
314-966-1500

HAZAN, JOSEPH OBG
242B WOODSON
ST LOUIS, MO 63114
314-427-2424

HEADRICK, JOHN A IM
11133 DUNN RD
ST LOUIS, MO 63136
314-355-2300

HEGOE, KORGI V IM
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100

HEINS, JAMES N IM
ST. LOUIS MEOICAL CLINIC
3009 NO. BALLAS RD.
ST LOUIS, MO 63131
314-432-1111

HELBING, EDWARD J OS
250 ALAMEDA #105
SANTA FE, NM 87501

HELLER, RANDALL L JR OBG
1034 BRENTWOOD SUITE 946
ST. LOUIS, MO 63117
314-725-9300

HELLWEG, RAYMOND W PO
3220 PARKER RO
FLORISSANT, MO 63033
314-921-4500

HENDIN, AARON IM
5203 CHIPPEWA
SUITE 303
ST LOUIS, MO 63109
314-4B1-3434

HENRY, CATHERINE G CD
176B GOLDENHORN CT.
MARYLANO HGHTS, MO 63043
314-454-4B60

HENSCHEL, EUGENE V IM
55 BROAOVIEW DR
ST LOUIS, MO 63105
314-832-3303

HENSELMEIER, OALE M FP
12255 DEPAUL DRIVE
SUITE 600
BRIOGETON, MO 63044
314-291-1074

HER, KYU S PD
624 HAVERFORO RO
ST LOUIS, MO 63124
314-644-8408

HERJANIC, MARIJAN P
1420 GRATTAN
ST LOUIS, MO 63104
314-241-7600

HERMAN, MORRIS GS
3555 SUNSET OFFICE OR
ST LOUIS, MO 63127
314-821-3900

HERNANOEZ, SALVADOR R ORS
6500 CHIPPEWA AVE
ST LOUIS, MO 63109
314-832-3210

HERRIFORD, MERLE B U
2715 N. UNION
ST. LOUIS, MO 63113
314-261-3300

HERRMANN, VIRGINIA M GS
1325 S GRAND BLVO.
ST. LOUIS, MO 63104
771-7600

HERSHEY, FALLS B GS
621 S NEW BALLAS RO
ST LOUIS, MO 63141
314-567-6666

HERTEL, RONALD C ORS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63105
314-721-7325

HERZOG, GODOFREDO M OBG
77 WESTPORT PLAZA
SUITE 265
ST. LOUIS, MO 63141
314-B78-7333

HESKER, ALBERT E R
2821 N BALLAS RO STE C-
ST LOUIS, MO 63131
314-432-5284

HESS, JOHN P IM
1035 BELLEVUE STE. 313
ST. LOUIS, MO 63117
647-0233

HEUSLER, ANTON F P
12255 DEPAUL DRIVE
SUITE 330
BRIOGETON, MO 63044
314-291-7449

HEUTEL, LEE B FP
7200 MANCHESTER
ST LOUIS, MO 63143
314-645-7744

HIATT, BARRY A P
4524 FOREST PARK AVE.
SUITE 102
ST LOUIS, MO 63108
314-367-B718

HIATT, H C IM
7937 BIG BEND BLVD.
ST LOUIS, MO 63119

HICKEY, JAMES L OBG
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5515

HICKS, ROBT S P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-2266

HIGGINS, PHILIP C OBG
1 CLAYCHESTER
ST LOUIS, MO 63131
314-432-8505

HILBERT, PAUL H FP
2905 CHEROKEE ST
ST LOUIS, MO 63118
314-771-2428

HILDRETH, HOWARD R OPH
15022 CLAYMOOR CT
CHESTERFIELD, MO 63017

HILL, CHESTER J IM
725 SWARTHMORE LANE
UNIVERSITY CITY, MO 63130
314-771-2074

HILL, M. ROBERT IM
6150 OAKLAND AVE.
ST. LOUIS, MO 63139
314-645-B510

HILL, XACADENE A FP
4067 DR MARTIN LUTHER KING
ST LOUIS, MO 63113
314-535-6B59

HILLMAN, RICHARD E PD
P. O. BOX 14B71
ST LOUIS, MO 63178
314-454-6051

HINRICHS, JAMES H IM
12255 DEPAUL DR.
BRIDGETON, MO 63044
314-291-7730

HIRONIMUS, JOHN E D
6651 CHIPPEWA ST STE 20
ST LOUIS, MO 63109
314-645-5320

HIRSCH, JOHN D GS
216 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-7185

HIRSHBERG, GARY E AN
660 SOUTH EUCLID AVE.
ST. LOUIS, MO 63110
314-454-2B58

HOBBS, JOHN E OBG
25 WOODENCREST OR
ST LOUIS, MO 63124

HOOEL, KENNETH A OBG
621 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
569-6880

HOEHN, JOHN P III GS
12255 OE PAUL DR
BRIOGETON, MO 63044
314-569-3322

HOELZER, DAVID R IM
3502 PESTALOZZI
ST. LOUIS, MO 63118
314-771-7600

HOELZER, KAREN L IM
3502 PESTALOZZI
ST. LOUIS, MO 63118
314-771-7600

HOFER, JEFFREY S IM
12460 WHISPER HOLLOW DR.
#H
MARYLANO HEIGHT, MO 63043

HOFFMAN, ROBERT J PO
11115 NEW HALLS FERRY
FLORISSANT, MO 63033
314-B37-2808

HOFFMAN, WILLIAM F N
12255 OE PAUL OR.
SUITE 830
BRIDGETON, MO 63044
314-291-6556

HOFFMANN, AUGUSTIN D IM
4920 MCCAUSLANO
ST LOUIS, MO 63109

HOFFMANN, RONALO E ORS
12255 OE PAUL DR
BRIDGETON, MO 63044
314-739-7654

HOFFMANN, SANORA S IM
231 E. ARGONNE
KIRKWOOD, MO 63122
314-821-2021

HOFSTATTER, LEOPOLD N
76B GLEN VISTA OR
ST LOUIS, MO 63122
314-644-8107

HOGAN, CORNELIUS E IM
3654 S GRAND BLVD
ST LOUIS, MO 63118
314-773-0898

HOGAN, JOHN R IM
1303 WEBSTER PATH DR.
ST LOUIS, MO 63119
314-644-6161

HOGAN, PATRICK A N
1034 S BRENTWOOD
ST LOUIS, MO 63117
314-725-1522

HOGAN, PATRICK C OBG
10004 KENNERLY RD
ST LOUIS, MO 63128
314-842-3445

HOLBROOK, CHAS K OM
11655 W FLORISSANT
FLORISSANT, MO 63033
314-B31-5200

HOLDER, BARRETT K ORS
ORTHOPEDICS ASSOCIATES
3009 NORTH BALLAS RD.
ST LOUIS, MO 63131
314-569-0612

HOLEMON, R. EUGENE P
3009 N. BALLAS RD.
SUITE #110
ST LOUIS, MO 63131
314-567-5000

HOLLO, VENCEL W GS
911 SOUTH BRENTWOOD
ST LOUIS, MO 63105
314-725-4747

HOLLOCHER, RICHARD J ORS
777 S NEW BALLAS RD
CREVE COEUR, MO 63141
314-567-5B50

HOLLOMAN, WALTER G OR
11155 DUNN RD.
SUITE 203
ST. LOUIS, MO 63136
314-355-5032

HOLMES, NANCY E PD
35 N. CENTRAL
CLAYTON, MO 63105
314-721-2262

HOLSCHER, EDWARO C ORS
234 W JACKSON RD
WEBSTER GROVES, MO 63119
314-961-9212

HOLT, EARL P JR ORS
5505 DELMAR BLVD
ST LOUIS, MO 63112
314-367-B33B

HOLT, WM E P
4524 FOREST PARK BLVO
ST LOUIS, MO 63108
314-367-3077

HOLTMANN, BARBEL PS
4949 BARNES HOSPITAL PLAZA
SUITE 17424
ST LOUIS, MO 63110
314-454-3455

HOLTZ, ALAN S GS
12166 BIG BEND BLVD.
KIRKWOOO, MO 63122
314-822-7200

HOLTZ, SUMNER DR
5535 DELMAR
ST LOUIS, MO 63112
314-361-1212

HOOKERMAN, BRUCE J D
12255 DEPAUL DR
BRIOGETON, MO 63044
314-291-2588

HOOVER, BERNARD L IM
3915 WATSON RO
ST LOUIS, MO 63109
314-644-7100

HORAN, DAVID W EM
141-C W. WOODBINE RD.
ST. LOUIS, MO 63122
HORENSTEIN, SIMON N
456 N NEW BALLAS RD.
ST LOUIS, MO 63141
314-567-3970
HORNER, JOHN L IM
GRANT MEDICAL CLINIC
114 N. TAYLOR
ST LOUIS, MO 63108
314-534-8600
HORWITZ, IRWIN B ORS
900 S. HANLEY RD.
ST LOUIS, MO 63105
HOWE, ALBERT L IM
300 S GRAND
ST LOUIS, MO 63103
314-658-5640
HOWE, LOUIS F FP
1136 RIDGELYNN
ST LOUIS, MO 63124
HOY, EDWARD J OPH
202 FAIRVIEW ST.
WATERTOWN, WI 53094
HUANG, SHI H NS
12 RAMSGATE DR
ST LOUIS, MO 63132
HUBERT, JOHN W IM
12255 DEPAUL DR.
BRIDGETON, MO 63044
314-291-7730
HUCK, FRANK F GP
P. O. BOX 1386
SAFFORD, AZ 85546
HUCK, RICHARD F JR IM
2821 N BALLAS
ST LOUIS, MO 63131
314-872-9310
HUDGENS, RICHARD W P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-2266
HUFFAKER, WILLIAM H PS
11155 DUNN RD.
SUITE 202E
ST. LOUIS, MO 63136
HUGGINS, ALBERT M IM
6651 CHIPPEWA ST
ST LOUIS, MO 63109
314-644-3997
HUGHES, CHAS P N
1515 LAFAYETTE
ST LOUIS, MO 63104
314-622-5181
HUGHES, ROBT G OM
11745 OLIVE BLVD
ST LOUIS, MO 63141
314-567-5770
HULBERT, BERNARD IM
8112 DELMAR BLVD
ST LOUIS, MO 63130
314-725-7400
HUMMEL, ANTON J OPH
5203 CHIPPEWA ST
ST LOUIS, MO 63109
314-352-1881
HUMMEL, WM C R
1924 MUIR WOODS
ST LOUIS, MO 63131
314-567-1656
HUNLETH, FRANK E OBG
12615 OLD TESSON RD.
ST LOUIS, MO 63128
314-645-2003
HURLEY, JOSEPH J GS
615 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-6666
HUSSEIN, DILBER AN
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
314-771-7600
HUTCHINSON, JAMES H IM
2805 N. GEYER RD.
ST LOUIS, MO 63131
HUTCHINSON, WILLIAM B OR
2821 N BALLAS RD
ST LOUIS, MO 63131
314-432-5284
HYMAN, ANNA P
818 OLIVE
%MILLAR/SCHAEF/HOFFMAN
ST LOUIS, MO 63101
IKEDA, SHIGEMASA AN
1325 S GRAND
ST LOUIS, MO 63104
314-771-7600
IKEN, RICHARD J PO
10004 KENNERLY RD.
ST. LOUIS, MO 63128
843-0500
INMAN, MAX M IM
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100
IP, AIDAN W PO
5398 PERSHING #3E
ST. LOUIS, MO 63112
314-432-1854

IRVIN, WM M P
1035 BELLEVUE STE 202
ST LOUIS, MO 63117
314-644-6200
ISHIDA, YASUO OBG
6744 CLAYTON RD
ST LOUIS, MO 63117
314-645-6100
ISLAM, MOHAMMED GS
1000 HILLSBORO RD.
HIGH RIDGE, MO 63049
314-344-6000
ISSERMAN, MICHAEL J OPH
456 N. NEW BALLAS RD.
ST LOUIS, MO 63141
314-432-1134
ITTNER, GEO W IM
6306 PERSHING AVE.
ST. LOUIS, MO 63130
IWANE, AKIRA AN
#5 CRICKET AVE.
ST LOUIS, MO 63144
314-454-2858
IZMIRLIAN, GRANT FP
1040 N MASON RD
ST LOUIS, MO 63141
314-434-7444
JABLONSKI, RAYMOND C R
#6 JUNGERMAN CR. #L-4
ST. PETERS, MO 63376
314-946-6811
JACKSON, DARWIN C OBG
100 N. EUCLID AVE.
ST. LOUIS, MO 63108
314-367-2200
JACOB, KARL A NS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-9955
JACOBS, CHAS C OTO
43 MUIRFIELD LN
ST LOUIS, MO 63141
314-521-1414
JACOBS, FREDERICK A PO
10929 ABBOTT AVE
SUN CITY, AZ 85351
JAIN, SAVITRI G IM
533 COUCH AVE.
ST LOUIS, MO 63122
314-821-9140
JAIN, SUMER C AN
12122 CARBERRY PL
ST. LOUIS, MO 63131
314-344-7047
JANNEY, JAMES G JR IM
950 FRANCIS PL
CLAYTON, MO 63105
314-726-6512
JARVIS, CATHY C IM
15951 THROWBRIDGE RD
CHESTERFIELD, MO 63017
314-391-5652
JATALA, IJAZ A P
1810 MANOR HILL
ST LOUIS, MO 63131
314-361-8199
JAUDON, JOS C PO
55 S GORE
ST LOUIS, MO 63119
JAVDAN, RON IM
14220 TULLYTOWN
CHESTERFIELD, MO 63017
314-434-1399
JEAN, J T IM
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-361-5400
JENKINS, JAMES J AN
216 SO KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-7954
JENNY, ARTHUR B NS
344 JEFFERSON RD
ST LOUIS, MO 63119
314-454-3274
JENSEN, JOSHUA E GS
11155 DUNN RD STE 208
ST LOUIS, MO 63136
314-741-3400
JENSEN, JOSHUA E II GS
CHRISTIAN HOSPITAL NO
11155 DUNN RD
ST LOUIS, MO 63136
314-741-3400
JICK, SIDNEY CD
10287 CLAYTON RD
ST LOUIS, MO 63124
314-997-3212
JOFFE, WM S OPH
211 N MERAMEC AVE
CLAYTON, MO 63105
314-726-0025
JOFTUS, MORRIS IM
522 N. NEW BALLAS
SUITE 280
ST LOUIS, MO 63141
314-432-1833
JOHANS, THOMAS G AN
621 S. NEW BALLAS
ST. LOUIS, MO 63141
314-872-8221

JOHNSON, CHAS J PS
1035 BELLEVUE
ST LOUIS, MO 63117
314-664-6644
JOHNSON, FRANK E GS
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
314-771-7600
JOHNSON, MICHAEL K OBG
4949 BARNES HOSPITAL
SUITE #16310
ST. LOUIS, MO 63110
314-361-0313
JOHNSON, MITCHELL D GS
40 N FLORISSANT RD
FERGUSON, MO 63135
314-521-1302
JOHNSON, ROY FP
15201 OLIVE BLVD.
APT. 417
CHESTERFIELD, MO 63017
JOHNSON, TOM A FP
615 SO NEW BALLAS RD
ST LOUIS, MO 63141
314-569-6010
JOHNSTON, DALE E OR
7819 STANFORD
ST. LOUIS, MO 63130
314-454-2286
JOHNSTON, GLEN P OPH
EAST PAVILION SUITE 17413
4949 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-367-1181
JOHNSTONE, JOHN T IM
206 W ARGONNE
KIRKWOOD, MO 63122
314-966-3400
JONES, DOROTHY J PO
500 S. KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-3528
JONES, GREY OBG
P. O. BOX 222
BLAWENBURG, NJ 08504
JONES, JAMES D II AN
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-454-2858
JONES, JAMES H OPH
1035 BELLEVUE AVE
ST LOUIS, MO 63117
314-647-4034
JONES, OTEY S FP
2010 LONGFELLOW
ST LOUIS, MO 63104
JONES, RICHARD A IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-4174
JONES, SARA T AN
7347 MARYLAND
ST LOUIS, MO 63130
314-727-6300
JONES, SCOTT O P
6245 ODELL
ST. LOUIS, MO 63139
314-771-7600
JONES, VICTOR T R
950 FRANCIS PL
ST LOUIS, MO 63105
314-863-1888
JORDAN, WALTER R FP
18012 DESERT GLEN DR.
SUN CITY WEST, AZ 85372
JOSEPH, HAROLD J IM
828 CELLA RD
ST LOUIS, MO 63124
314-872-8740
JOSEPH, MARY G IM
1755 SO. GRAND BLVD.
ST. LOUIS, MO 63104
314-771-0500
JOSLYN, HAROLD L GE
65 CLERMONT LANE
ST LOUIS, MO 63124
JOST, CHAS A FP
2 BELLERIVE ACRES
ST. LOUIS, MO 63121
JOTTE, RICHARD F FP
10300 ST CHARLES ROCK RD
ST ANN, MO 63074
314-427-2022
JUDD, DONALD R TS
950 FRANCIS PL
ST LOUIS, MO 63105
314-721-3919
JUERGENS, WM G IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-721-0666
JULIEN, RENE GS
POST OFFICE BOX 852
EAST ST LOUIS, IL 62203
618-271-4090
JUNKER, JAMES A OR
510 S. KINGSHIGHWAY BLVD.
ST. LOUIS, MO 63110
454-2295

KABIR, MOHAMMED A P
10000 HIGHWAY 366
ST LOUIS, MO 63126
314-821-1640
KAHN, LAWRENCE I PD
4566 SCOTT AVE
ST LOUIS, MO 63110
314-658-5212
KAIRUZ, BARTOLOME C FP
10004 KENNERLY RD
ST LOUIS, MO 63128
314-843-4444
KAISER, GEO C GS
1325 S GRAND BLVD
ST LOUIS, MO 63104
314-773-2637
KAMAKAS, NICHOLAS C PD
1245 GRAHAM RD
FLORISSANT, MO 63031
314-838-3800
KAMENETZKY, STEPHEN A OPH
4910 FOREST PARK
SUITE 300
ST LOUIS, MO 63108
314-367-0074
KAMINSKI, DONALD L GS
3660 VISTA
ST LOUIS, MO 63104
314-865-3210
KANG, CHANG H GP
3616 S. BROADWAY
ST. LOUIS, MO 63118
314-772-5626
KANG, JUAN PTH
ALLEN MEDICAL LAB
2204 WELSCH INDUSTRIAL
ST LOUIS, MO 63141
314-355-2300
KANNEGIESSER, HARTMUT IM
820 MINARCA
ST. LOUIS, MO 63131
KANTOR, OWEN IM
4949 BARNES HOSPITAL PLAZA
SUITE #16422
ST LOUIS, MO 63110
314-367-9595
KAO, MING-SHIAN OBG
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-454-2343
KAPLAN, ALEX H P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
314-367-6243
KAPPESSER, NETAJEAN G FP
55 FAIR OAKS DR
ST LOUIS, MO 63124
314-966-1500
KAPPESSER, ROLAND C AN
55 FAIR OAKS
ST LOUIS, MO 63124
KARDESCH, MILTON IM
9293 WATSON RD
ST LOUIS, MO 63126
314-962-9878
KARL, MICHAEL M IM
4652 MARYLAND AVE
ST LOUIS, MO 63108
314-367-3113
KARR, ROBERT W IM
7049 MARYLAND
ST. LOUIS, MO 63130
314-454-2966
KARSH, ROBT S IM
2428 WOODSON RD
ST LOUIS, MO 63114
314-427-2424
KASINADHUNI, UDAYSHANKER AN
1317 PARKVIEW MEADOWS DR.
MANCHESTER, MO 63011
314-771-7600
KASKIE, CLIFFORD R OBG
6150 OAKLAND AVE.
ST LOUIS, MO 63139
314-645-8510
KASS, MICHAEL A OPH
660 S EUCLID
ST LOUIS, MO 63110
314-454-2722
KATSANTONIS, GEORGE OTO
6651 CHIPPEWA
ST LOUIS, MO 63109
314-647-5854
KAUFMAN, ROBT L IM
456 N NEW BALLAS RD
SUITE 299
ST LOUIS, MO 63141
314-569-1090
KAUP, CHANDRA S IM
1125 GRAHAM RD
FLORISSANT, MO 63031
314-838-5700
KAYES, JACK OPH
211 N MERAMEC
ST LOUIS, MO 63105
314-863-4200
KAZA, RAMARAO U
6500 CHIPPEWA
#1 SUITE 116
ST LOUIS, MO 63109
314-832-7227
KEATING, JAMES P PD
ST LOUIS CHILDRENS HOSP
P O BOX 14871
ST LOUIS, MO 63178
314-454-6006
KEFFLER, KARL L FP
7306 WISE AVE
ST LOUIS, MO 63117
314-781-3737
KEITHLY, DENNIS J EM
121 HIDDEN CREEK DR.
ELLISVILLE, MO 63011
314-569-6090
KELLER, MAURICE J PD
9049 CLAYTON RD
ST LOUIS, MO 63117
314-727-6300
KELLETT, JOHN G FP
243 KENORA CT
WEBSTER GROVES, MO 63119
314-892-3500
KELLY, JOHN J IM
ST. LOUIS MEDICAL CLINIC
3009 NO. BALLAS RD.
ST LOUIS, MO 63131
314-432-1111
KELLY, R E OM
819 LOCUST ST
ST LOUIS, MO 63101
314-621-4300
KELTNER, RAYMOND M JR GS
1325 S GRAND
ST LOUIS, MO 63104
314-771-7600
KENDIG, JOHN H NS
5505 DELMAR BLVD-RM 509
ST LOUIS, MO 63112
314-367-8787
KENDIS, JOS B IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5011
KENNEY, JOHN D ORS
12615 OLD TESSON ROAD
ST LOUIS, MO 63128
314-849-0311
KENNINGTON, L J FP
14382 WOODLAKE DR.
CHESTERFIELD, MO 63017
314-434-3333
KESSEL, JAMES W OBG
2 JACKLYNN CT
ST LOUIS, MO 63132
314-432-8388
KESSLER, SHELDON PD
12255 DEPAUL DR. SUITE 490
DEPAUL PROF BLDG.
BRIDGETON, MO 63044
314-739-5333
KESSLER, WILLIAM J OPH
3655 VISTA
ST. LOUIS, MO 63110
314-865-3210
KEYES, E L GS
900 S HANLEY RD
ST LOUIS, MO 63105
KHAN, ABDUL G PD
4150 JEFFCO BLVD.
ARNOLD, MO 63010
314-464-1000
KHAN, ABDUL R P
9730 E WATSON RD
ST LOUIS, MO 63126
314-863-9711
KHAN, ALTAF A GE
12166 BIG BEND BLVD
ST LOUIS, MO 63122
314-966-6790
KHODADOUST, KAVOUS PTH
1606 GRATTAN
ST LOUIS, MO 63104
314-611-5432
KIELMOVITCH, IZAK H OTO
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
314-771-7600
KIENZLE, EDWARD FP
P. O. BOX 356
BONNE TERRE, MO 63628
KILKER, DONALD E FP
7520 NATURAL BRIDGE RD
NORMANDY, MO 63121
314-385-4555
KILO, CHAS IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5529
KIM, STANLEY W R
777 S NEW BALLAS
ST LOUIS, MO 63141
314-567-4350
KIM, WILLIAM W AN
1325 S GRAND BLVD
ST LOUIS, MO 63104
314-771-7600
KIMELMAN, NATHAN IM
6744 CLAYTON RD
ST LOUIS, MO 63117
314-781-3400
KING, EUSTACE E III FP
111 CHURCH ST
FERGUSON, MO 63135
314-524-7975
KING, FRANCIS C FP
11040 MANCHESTER RD
ST LOUIS, MO 63122
314-822-4646
KING, JAMES P PD
4211 BAYLESS RD
AFFTON, MO 63123
314-638-4010
KING, JOHN V JR PUD
2995 CLARKSON RD
CHESTERFIELD, MO 63017
314-739-5070
KING, JOHN V SR FP
615 S NEW BALLAS RD
ST LOUIS, MO 63131
314-569-6010
KING, M. KENTON IM
660 S EUCLID
ST LOUIS, MO 63110
314-454-2461
KINGSLAND, ROBERT C IM
6150 OAKLAND
ST LOUIS, MO 63139
KINSELLA, EDWARD D GE
1035 BELLEVUE
RICHMOND HEIGHT, MO 63117
314-645-1344
KINSELLA, MARIA S IM
22 CONWAY LANE
ST. LOUIS, MO 63124
314-622-4761
KINSELLA, PETER W IM
1035 BELLEVUE
ST LOUIS, MO 63117
KINSELLA, RALPH A JR IM
6305 WESTMINSTER PL
ST LOUIS, MO 63130
314-622-5000
KIPNIS, DAVID M IM
660 S EUCLID
ST LOUIS, MO 63110
314-454-3242
KISSANE, JOHN M PTH
WASHINGTON U SCH MED
660 S. KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-3771
KISTLER, W. DAVID JR IM
SUITE 113 MED W BLDG
950 FRANCIS PLACE
CLAYTON, MO 63105
314-721-0411
KISTNER, WM F PUD
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-3161
KITCHEN, ALICE D P
1221 SOUTH GRAND AVE.
ST. LOUIS, MO 63104
314-771-7600
KITOWSKI, THEODORE L R
3709 STONEGATE
QUINCY, IL 62301
KIYANCLAR, M. EMIN AN
DEPT OF ANES. WASH UNIV.
660 S. EUCLID
ST LOUIS, MO 63110
314-454-2858
KLEIN, ARNOLD G FP
14164 TRAILTOP DR
CHESTERFIELD, MO 63017
KLEIN, BERT H FP
34 N RIDGEWOOD AVE
ARCADIA, MI 49613
KLEIN, JACOB OBG
777 S. NEW BALLAS RD
ST. LOUIS, MO 63141
314-569-2424
KLEIN, SAUL J U
456 N NEW BALLAS RD STE
ST LOUIS, MO 63141
314-567-6071
KLIEFOTH, JAMES A GS
2643 A KEOKUK
ST. LOUIS, MO 63118
314-771-0050
KLIPPEL, BERNHARDT W GS
52 FAIR OAKS
ST LOUIS, MO 63124
KLOECKER, RICHARD J GS
12255 DEPAUL SUITE 160
BRIDGETON, MO 63044
314-291-3787
KLOECKER, ROBT P OBG
3009 N. BALLAS RD.
ST LOUIS, MO 63131
314-872-9200
KLUZAK, THOMAS R OBG
621 S NEW BALLAS
ST LOUIS, MO 63141
314-569-6880
KNEAL, ELLSWORTH PD
725 S SKINKER BLVD
ST LOUIS, MO 63105

KNIGHT, FRANKLIN P FS
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-837-1333
KNIGHT, JAMES W GS
7520 NATURAL BRIDGE,
SUITE 102
ST. LOUIS, MO 63121
314-385-7300
KNIGHT, WM A JR GE
1035 BELLEVUE AVE.
ST LOUIS, MO 63117
314-645-3400
KNOCK, HENRY L PD
325 N. KIRKWOOD RD.
KIRKWOOD, MO 63122
314-966-8728
KNOPF, HARRY L OPH
211 N MERAMEC ST
CLAYTON, MO 63105
314-863-4200
KNOWLES, ROBT R P
1034 SOUTH BRENTWOOD BL
ST LOUIS, MO 63117
314-725-1522
KNOWLTON, NORMAN P JR IM
14 OAKLEIGH LN
ST LOUIS, MO 63124
314-361-7660
KODNER, IRA J CRS
216 S. KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-7177
KOEHLER, GEO A IM
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-576-5014
KOEHLER, ROBERT E DR
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-2191
KOENIG, MARVIN I OPH
900 N HWY 67 LINDBERGH
FLORISSANT, MO 63031
314-838-0300
KOERNER, KENNETH A PD
2821 N BALLAS RD
ST LOUIS, MO 63131
314-432-1854
KOHLER, LOUIS H P
100 N EUCLID AVE
ST LOUIS, MO 63108
314-367-4222
KOLKER, ALLAN E OPH
660 S EUCLID AVE
ST LOUIS, MO 63110
314-454-3147
KOLODNY, ROBT C IM
4910 FOREST PARK BLVD
ST LOUIS, MO 63108
314-361-2377
KOPELSON, JEFFREY C FP
391 B NEWBURY DR.
BALLWIN, MO 63011
314-394-2639
KOPEN, DAN F GS
NPW MEDICAL CTR.
1010 E. MOUNTAIN DR.
WILKES-BARRE, PA 18702
KOPMAN, ERCUMENT A AN
660 S. EUCLID AVE.
ST LOUIS, MO 63110
314-454-2858
KORENBLAT, PHILLIP E A
10287 CLAYTON RD
ST LOUIS, MO 63124
314-997-3212
KORN, ROBT L PD
456 N NEW BALLAS
ST LOUIS, MO 63141
314-567-6868
KOSURI, LALITHA IM
6500 CHIPPEWA SUITE 124
ST. LOUIS, MO 63109
314-352-1422
KOTNER, LAWRENCE M IM
1040 N. MASON RD.
ST LOUIS, MO 63141
314-576-7196
KOTNER, LAWRENCE M JR R
270 BELLINGTON LANE
ST. LOUIS, MO 63141
314-454-7230
KOVAC, S. ROBERT OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-5016
KOVNAR, EDWARD H PD
11758 MOMARTE LANE
ST. LOUIS, MO 63141
314-432-2131
KOWERT, EDWARD H P
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-367-3829
KRAEGER, RUSSELL R TS
SUITE #171 533 COUCH AVE.
ST LOUIS, MO 63122
314-965-9660
KRAETSCH, ROBERT E IM
4949 BARNES HOSPITAL PLAZA
SUITE #16422
ST LOUIS, MO 63110
314-367-9595
KRAIN, SAMUEL R
17 BRIAR CLIFF
ST LOUIS, MO 63124
314-721-0242
KRAMER, JAN L GS
7748 ATTINGHAM LN.
ST. LOUIS, MO 63119
314-454-2000
KRANER, JUSTIN F OBG
2821 N. BALLAS RD.
SUITE 205
ST LOUIS, MO 63131
314-567-4373
KRANTMAN, HERBERT J A
777 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-2015
KRAUS, FREDERICK T PTH
ST JOHNS MERCY MED CTR
615 S. NEW BALLAS RD.
ST LOUIS, MO 63141
314-569-6194
KRAUSE, G. LYNN GS
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-576-0060
KRECHEL, SUSAN L AN
13881 TESSON FERRY RD
ST LOUIS, MO 63128
314-454-2858
KREISMAN, JEROLD J P
522 N. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-1717
KRETCHMAR, ALAN P OPH
3009 N BALLAS RD.
ST LOUIS, MO 63131
314-872-7263
KREWET, FRANK A III IM
1700 S SECOND ST
ST LOUIS, MO 63177
314-622-1630
KRIEGSHAUSER, JAMES W IM
3915 WATSON RD.
ST. LOUIS, MO 63109
314-644-7100
KRISHNASAMY, BHARATH K NM
510 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-3566
KROEGER, GEO B JR OTO
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-9230
KROJANKER, ROLF J P
6651 CHIPPEWA
ST LOUIS, MO 63109
314-644-2395
KROMER, CHAS J IM
3545 LAFAYETTE
ST LOUIS, MO 63104
314-664-6500
KRONEMER, NORTON S PD
12660 LAMPLIGHTER SQUAR
ST LOUIS, MO 63128
314-849-2400
KRUMMENACHER, THOMAS K OPH
DEPT OF OPTHALMOLOGY
3660 VISTA
ST. LOUIS, MO 63110
314-865-3210
KRUPIN, THEODORE OPH
660 S EUCLID
ST LOUIS, MO 63110
314-454-2723
KUCZER, ARNOLDO OTO
4511 FOREST PARK
ST LOUIS, MO 63108
314-367-7711
KUEBEL, RICHARD J IM
621 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-567-1992
KUEBRICH, THOS C FP
111 CHURCH ST
FERGUSON, MO 63135
314-521-0018
KUHLMAN, RALPH F IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-721-0666
KUHLMAN, ROBERT E ORS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-367-4338
KUHN, LARRY P
621 S NEW BALLAS
ST. LOUIS, MO 63141
314-569-1011
KUHN, NOBUKO O IM
6951 DELMAR BLVD
ST LOUIS, MO 63130
314-863-0854
KULAK, GARY P
621 S NEW BALLAS
ST LOUIS, MO 63141
314-567-4470
KULKARNI, NANDINI S AN
621 S. NEW BALLAS RD.
CREVE COEUR, MO 63141
314-569-6880
KUMAR, MOHAN V FP
1405 SUMMIT RIDGE DR.
ST. LOUIS, MO 63141
314-434-8388
KUMAR, RAVI S AN
1361 CLARKSON PINES
ELLISVILLE, MO 63011
314-454-2858
KUMARI, VIJAYA OBG
3009 NORTH BALLAS RD.
ST. LOUIS, MO 63131
314-872-9200
KUNST, EDWARD J IM
645 S. NEW BALLAS RD.
APT. A 2-D
ST. LOUIS, MO 63141
314-569-6000
KUTRYB, WALTER J IM
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-838-0335
KUTTNER, MARIANNE PD
7062 WATERMAN
ST LOUIS, MO 63130
KWAN, VICENTE W IM
P. O. BOX 399
POTOSI, MO 63664
314-438-5424
KYAW, MYO M DR
11155 DUNN RD
ST LOUIS, MO 63136
314-355-6565
L'ECUYER, JEROME L PD
9313 MANCHESTER RD
ST LOUIS, MO 63119
LA DRIERE, RAYMOND J PD
2821 N. BALLAS RD.
SUITE 110
ST. LOUIS, MO 63131
314-432-3665
LACSON, LETICIA D CHP
254 PENWOOD CT
CHESTERFIELD, MO 63017
314-838-5700
LACY, PAUL E PTH
WASHINGTON U SCH MED
660 S. EUCLID
ST LOUIS, MO 63110
314-454-3771
LADD, CHAS B GP
13045 TESSON FERRY RD.
ST LOUIS, MO 63128
314-843-8700
LAIRD, JOHN M IM
3009 N. BALLAS RD.
SUITE 108
ST. LOUIS, MO 63131
314-872-3620
LAM, ERNESTO S GS
142 E LOCKWOOD
ST LOUIS, MO 63119
314-961-4848
LAMB, WANDA P
456 N NEW BALLAS RD
SUITE 282
ST LOUIS, MO 63141
314-567-5707
LAMBERG, ROBERT L OPH
211 NORTH MERAMEC
CLAYTON, MO 63105
314-726-2277
LAMPING, J. DANIELS OBG
77 WESTPORT PLAZA DR.
SUITE 363
ST. LOUIS, MO 63141
314-576-9000
LAMPROS, WM P OTO
1035 BELLEVUE
ST LOUIS, MO 63117
314-781-6212
LANDAU, WM M N
660 S EUCLID AVE
ST LOUIS, MO 63110
314-454-2385
LANDER, JERROLD J IM
5505 DELMAR
SUITE 503
ST. LOUIS, MO 63112
314-361-8100
LANDER, ROBERT C ORS
456 N NEW BALLAS
SUITE 369
ST LOUIS, MO 63141
314-569-1830
LANDRY, J. HUBERT R
2821 N BALLAS RD
ST LOUIS, MO 63131
314-432-5284
LANDY, RICHARD PTH
6150 OAKLAND
ST LOUIS, MO 63139
314-991-2916

LANE, CLINTON W 950 FRANCIS PL ST LOUIS, MO 63105 314-862-0992	O
LANE, DANL K 950 FRANCIS PL ST LOUIS, MO 63105 314-862-0992	O
LANG, JOHN J 507 FAIRWAYS CIRCLE ST LOUIS, MO 63141 314-434-1500	R
LANGE, ADOLPH C 6536 OEVONSHIRE ST LOUIS, MO 63109	OPH
LANGE, DAVID R SUITE #360 12255 OEPAUL DR. BRIDGETON, MO 63044 314-291-7181	ORS
LANGENBACH, ALFREO M 10012 WOOOLAWN ST LOUIS, MO 63124	FP
LANIER, EARL W 2386 N. HWY 67 FLORISSANT, MO 63033 314-837-0030	FP
LANSANGAN, ISAIAS P 13 MERAMEC HGTS SHOPPING CTR ARNOLO, MO 63010 314-296-0500	IM
LANSCHE, W. EOWARO 3009 N. 8ALLAS RO. ST LOUIS, MO 63131 314-569-0612	ORS
LAROCCA, FELIX F 18 WEST POINT LANE ST LOUIS, MO 63131 314-567-4080	CHP
LARSEN, VIRGINIA L 5825 SOUTHWEST ST ST LOUIS, MO 63139 314-647-5800	PO
LARSON, PAUL U 6223 SOUTHLAND ST LOUIS, MO 63109 314-664-5500	IM
LATTINVILLE, HENRY E 12255 OEPAUL OR. BRIDGETON, MO 63044 314-291-6556	NS
LAU, LUIS 1467 REAUVILLE DR-WARSO ST LOUIS, MO 63122 314-487-0400	P
LAUBER, JOS J 615 S NEW BALLAS RD ST LOUIS, MO 63141 314-569-6010	FP
LAUER, JOHN D 555 HIGH MEAOOW RD ST LOUIS, MO 63131 314-878-4680	R
LAUTER, STEVEN 777 S NEW BALLAS ST. LOUIS, MO 63141 314-872-8740	IM
LAUX, FRANCE A 2204 WELSCH INDUSTRIAL CT. ST LOUIS, MO 63141 314-432-1850	PTH
LAWRENCE, GEO H 12303 OEPAUL OR BRIDGETON, MO 63044 314-344-7135	N
LAWRENCE, HENRY S 1465 S. GRANO BLVO. ST. LOUIS, MO 63104 314-865-4000	PO
LAWTON, JOHN T 522 N. NEW 8ALLAS RO ST LOUIS, MO 63141 314-432-8014	IM
LAYCOB, LELANO M 14377 WOOOLAKE DR. CHESTERFIELD, MO 63017 314-878-8390	PO
LE, HIEU H 1325 S. GRAND 8LVO. ST. LOUIS, MO 63104 314-771-7600	AN
LE BLANC, LEO J 621 S NEW 8ALLAS RO ST LOUIS, MO 63141 314-567-9930	CRS
LEACH, WILFRED 3655 VISTA AVE ST LOUIS, MO 63110 314-773-1323	OTO
LEARY, DANL J JR 2445 COPPER 8EECH ST LOUIS, MO 63131 314-567-4442	R
LEE, DUK S 12848 TOPPING MEAOOWS OR. TOWN & COUNTRY, MO 63131 314-872-8221	AN
LEE, FRANSISKA A ST. JOHN'S MERCY HOSP. 615 SO. NEW BALLAS RO. ST LOUIS, MO 63141 314-569-6844	ONC
LEE, JOSEPH KING TAK 510 S. KINGSHIGHWAY ST. LOUIS, MO 63110 314-454-2191	R
LEE, KIL S 11155 OUNN RO ST LOUIS, MO 63136 314-355-5032	OR
LEHNERT, STEPHEN E 1325 S. GRANO BLVO. ST. LOUIS, MO 63104 314-771-7600	OBG
LEIGHTNER, WM F 550 BEOFORO AVE ST LOUIS, MO 63130 314-487-6910	IM
LEMING, BERT H 11714 CRAIGVIEW DR ST LOUIS, MO 63141	PTH
LEMLEY, JOHN S 9293 WATSON RO. ST. LOUIS, MO 63126 314-962-9880	ONC
LENOBEL, MILTON I 10358 CHIMNEY ROCK DR. APT. 24 ST LOUIS, MO 63141 314-771-7643	ORS
LENZENHUBER, KARL J 9036 AMONA ST. LOUIS, MO 63123 314-771-7600	R
LEONHARDT, ERWIN M 10004 KENNERLY RD. SUITE 335 ST LOUIS, MO 63128 314-843-3800	IM
LEPKOWSKI, HEMLATA K 8 MORENA CT BALLWIN, MO 63011 314-227-2545	R
LEPLEY, CHARLES R P.O. BOX 1628 MARYLAND HTS., MO 63043 314-434-0419	GP
LERWICK, EVERETT R MO BAPTIST OIAGNOSTIC CTR. 3009 N. BALLAS STE. 216 ST LOUIS, MO 63131 314-567-5377	GS
LESLIE, CHAS H 1065 HAVERSHAM PL OES PERES, MO 63131	FP
LEVECK, KATHLEEN T 7334 OREXEL OR. ST. LOUIS, MO 63130 314-771-7600	OBG
LEVIN, MARVIN E 777 S NEW BALLAS RO ST LOUIS, MO 63141 314-432-6688	IM
LEVINE, LAURENCE A 4910 FOREST PARK ST LOUIS, MO 63108 314-454-7875	OTO
LEVITT, JOS 8011 CLAYTON RO. ST LOUIS, MO 63117 314-727-1977	IM
LEVITT, ROBT G 510 S KINGSHIGHWAY ST LOUIS, MO 63110 314-454-2191	DR
LEVY, JEROME F 8ARNES HOSP PLAZA SUITE 17308 ST LOUIS, MO 63110 314-367-9400	GS
LEVY, MORTON A 522 N NEW BALLAS RO CREVE COEUR, MO 63141 314-569-0160	IM
LEWIN, W. HOWARO 906 OLIVE ST ST LOUIS, MO 63101 314-421-1749	OPH
LEWIS, JAMES E 1401 S GRAND BLVO ST LOUIS, MO 63104 314-773-1650	PDS
LEWIS, ROBERT O 9187 ARROW DR. ST LOUIS, MO 63123 314-645-4940	OPH
LIAO, KUN T 11636 ADMINISTRATION DR ST LOUIS, MO 63141 314-567-3905	PTH
LIEB, FRANCIS X 621 S NEW BALLAS RO ST LOUIS, MO 63141 314-872-7991	PO
LIEBERMAN, DAVIO M 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110 314-361-5300	IM
LIEBHABER, HARVEY 8515 DELMAR ST LOUIS, MO 63124 314-991-1766	IM
LILLY, DOUGLAS R 621 S NEW BALLAS RD ST LOUIS, MO 63141 314-432-3456	NM
LIM, PIEMSAK 4200 N. CLOVERLEAF OR. SUITE N ST. CHARLES, MO 63301 314-724-7140	OBG
LIMA, JOSE A 1465 S. GRANO ST. LOUIS, MO 63104 314-577-5600	OTO
LINBERG, JOHN V 1034 S. BRENTWOOD ST. LOUIS, MO 63117 314-863-8866	OPH
LINOEMAN, CARL H 7101 WESTMORELANO ST LOUIS, MO 63130	FP
LINOEMAN, JOHN F 615 SO. NEW BALLAS RD. ST. LOUIS, MO 63141 314-569-6463	IM
LINOER, HOWARD E 3015 N 8ALLAS RO ST LOUIS, MO 63131 314-569-5131	PUD
LINK, ALEXANOER J 7215 MARYLAND ST LOUIS, MO 63130 314-432-5284	DR
LINS, ROBT O 309 MANCHESTER RD MANCHESTER, MO 63011 314-391-8710	PD
LIPSCHITZ, ERVIN 777 S NEW BALLAS RO ST LOUIS, MO 63141 314-872-7646	P
LIPSITZ, ELLIS S 100 N. EUCLID SUITE 2 LOWER LEVEL ST LOUIS, MO 63108 314-367-6528	IM
LISCHWE, DANIEL H 12255 OEPAUL ORIVE SUITE 600 BRIOGETON, MO 63044 314-291-1074	FP
LISS, JAY L 763 SOUTH NEW BALLAS RO ST LOUIS, MO 63141 314-569-0212	P
LISSNER, A. 8ART 11155 OUNN RO. SUITE 202E ST. LOUIS, MO 63136 314-441-7220	PS
LITTMANN, LEWIS E 56 CRESTWOOO DR. CLAYTON, MO 63105 314-727-0202	IM
LITZOW, PETER L 1325 S. GRANO BLVO. ST. LOUIS, MO 63119 314-771-7600	R
LIVINGSTON, DON G 650 MANCHESTER RO BALLWIN, MO 63011 314-527-6960	PO
LLINAS, ALFREDO J 319 B. HAYOEN ST. SAYRE, PA 18840 717-888-6666	GS
LO PICCOLO, VINCENT J JR 2821 N BALLAS RD ST LOUIS, MO 63131 314-567-4806	PO
LO PICCOLO, VINCENT J SR 2719 LACLEOE ROAD #C ST LOUIS, MO 63141	IM
LOCKHART, CHARLES G 4989 BARNES HOSP PLAZA ST. LOUIS, MO 63110 314-454-2855	GS
LOEB, VIRGIL 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110 314-454-5360	IM
LOEFFEL, ELLEN S 3654 S. GRANO ST LOUIS, MO 63118 314-776-4345	GYN
LOGIE, MACDONALO B 13697 PEACOCK FARM ST LOUIS, MO 63131 314-361-7373	R
LOHR, RO8T W 236 CONWAY HILL RD ST LOUIS, MO 63141	R
LOITMAN, BERNARO S 10 WASHINGTON TERR ST LOUIS, MO 63112	R

LONDE, ALAN M GS
1040 N. MASON RO.
ST LOUIS, MO 63141
314-434-2518
LONDE, SOL PD
2855 ROSCAMARE RO.
BEL AIR, CA 90024
LONOON, STANLEY L GS
456 N NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0131
LONERGAN, WARREN M IM
4910 FOREST PARK AVE
ST LOUIS, MO 63108
314-361-1167
LONG, FRANK B OBG
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-725-9300
LONG, JULIE A GS
BARNES HOSPITAL
ST. LOUIS, MO 63110
314-454-2666
LONSWAY, MAURICE J PD
8025 DALE AVE
ST LOUIS, MO 63117
314-644-2566
LORD, RICHARD E ORS
533 COUCH AVE.
SUITE 220
ST LOUIS, MO 63122
314-966-0111
LOTTES, J. OTTO ORS
6434 CHIPPEWA ST
ST LOUIS, MO 63109
314-752-1800
LOWENSTEIN, PAUL S GS
18 S KINGSHIGHWAY BLVD
ST LOUIS, MO 63108
LOYND, ROBT C OTO
950 FRANCIS PL
CLAYTON, MO 63105
314-727-3070
LU, FANG T AN
12858 SOMERTON RIOGE DR
ST LOUIS, MO 63141
LUBOWITZ, HERBERT IM
8515 DELMAR
ST. LOUIS, MO 63124
314-991-1766
LUECHTEFELO, FRANK ORS
12255 DEPAUL DR
BRIDGETON, MO 63044
314-739-7654
LUEDDE, PHILIP S OPH
7121 MARYLAND AVE
ST LOUIS, MO 63130
LUEHRS, ROBERT O CHP
200 S. BRENTWOOD
APT. 3F
ST. LOUIS, MO 63105
314-725-0187
LUGO, SAML GS
3125 LEMAY FERRY RD
ST LOUIS, MO 63125
314-487-3775
LUH, ANDREW M ORS
4110 VON TALGE RD
ST LOUIS, MO 63128
314-894-2404
LUM, JON T P
9378 OLIVE BLVO STE 215
ST LOUIS, MO 63132
314-991-0427
LUND, HERLUF G U
3654 S GRAND AVE
ST LOUIS, MO 63118
314-771-2444
LUND, ROBT H GS
1034 S BRENTWOOD
ST LOUIS, MO 63117
314-727-2011
LUTHER, GEORGE A ORS
533 COUCH AVE.
SUITE 220
ST LOUIS, MO 63122
314-966-0111
LYLES, THOMAS O U
1031 BELLEVIEW AVE.
SUITE 210
ST. LOUIS, MO 63117
314-644-0011
LYMAN, EDWARO H OTO
950 FRANCIS PL
ST LOUIS, MO 63105
314-727-3132
LYNXWILER, CHESTER P PDC
MED. DEPT. A2SB MONSANTO CO.
800 N. LINBERGH
ST. LOUIS, MO 63166
LYSS, CARL A IM
456 N NEW BALLAS RD
ST LOUIS, MO 63141
314-569-1090
LYSS, STANLEY B PD
456 N NEW 8ALLAS RD
ST LOUIS, MO 63141
314-872-8662

LYTTLE, GARNET C GS
665 S SKINKER BLVD
ST LOUIS, MO 63105
MAC CAUGHELTY, T. CAMERON AN
12764 SPRUCE PONO ROAD
ST LOUIS, MO 63131
314-567-1337
MAC OONALD, ROBT R JR DR
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-4442
MACDONALD, WM C IM
6744 CLAYTON RD
ST LOUIS, MO 63117
314-645-8333
MACEREN, RODOLFO L AN
108 CAMFIELD SQ DR.
CREVE COEUR, MO 63141
314-839-3800
MACHEFSKY, SIDNEY D R
510 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-3566
MACHEK, OTAKAR PM
6744 CLAYTON RD
ST LOUIS, MO 63117
314-645-6606
MACKEY, RICHARD L U
10007 KENNERLY RO.
ST. LOUIS, MO 63128
843-5500
MACLEOO, ANGUS IM
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127
314-821-3900
MACNISH, JAMES M U
229 BOMPART
ST LOUIS, MO 63119
MAODIPATI, SREEDEZI AN
1325 SOUTH GRAND
ST LOUIS, MO 63104
314-771-7600
MAOINUR, VISHWANATH S FP
5400 ARSENAL
ST. LOUIS, MO 63139
314-644-8000
MADRID, DOMINADOR O GS
2627 TELEGRAPH RD.
ST LOUIS, MO 63125
314-892-2066
MAGEE, W. EDWIN IM
RALSTON-PURINA CO.
835 SOUTH 8TH. STREET
ST LOUIS, MO 63188
314-982-3120
MAGINN, R. REILLY GS
911 S BRENTWOOD
ST LOUIS, MO 63105
314-725-4747
MAGRANE, OIANE M OBG
9411 ENGEL LANE
ST. LOUIS, MO 63132
314-771-7600
MAHADEVAN, JAMBUNATHAN IM
2838 S. GRAND
ST. LOUIS, MO 63118
314-771-0677
MAHE, GEO A IM
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105
314-727-5336
MAHER, THOS F R
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-4442
MAIN, ELLIOTT K OBG
7507 PARKDALE
ST. LOUIS, MO 63105
314-863-0036
MAITZ, CARLOS A OBG
BOX 3007
US NAVAL HOSPITAL
FPO MIAMI, FL 34051
MAJORS, PATRICK F IM
950 FRANCIS
ST. LOUIS, MO 63105
314-863-7766
MALIK, SARFRAZ A GE
6651 CHIPPEWA
SUITE 218
ST LOUIS, MO 63109
314-781-1580
MALLYA, ASHOK R P
5400 ARSENAL ST
ST LOUIS, MO 63139
314-644-8005
MALMBERG, VIRGIL L P
DEPT. OF PSYCHIATRY
4940 AUOUBON AVE.
ST. LOUIS, MO 63110
314-454-2848
MALT, SHERWIN H GS
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0770
MANANSALA, ANTONIO Q FP
YOKOTA AIR BASE
TOKYO, JAPAN, 00000

MANGELSDORF, THOMAS K P
621 S. NEW BALLAS
ST. LOUIS, MO 63141
314-567-9870
MANION, MARIA E CHP
522 N NEW BALLAS RD
SUITE 382
ST LOUIS, MO 63141
314-567-5280
MANION, PETER J PO
6405 MURDOCH AVE.,
ST LOUIS, MO 63109
MANLEY, CHAS B U
18 S. KINGSHIGHWAY #15-S
ST LOUIS, MO 63108
314-454-3385
MANNIS, CHARLES I ORS
522 N NEW 8ALLAS RD
ST LOUIS, MO 63141
314-432-2323
MANSKE, PAUL R ORS
12615 OLD TESSON FERRY RD
ST LOUIS, MO 63128
314-849-0311
MANTENA, RAJU N AN
571 PRINCEWAY CT.
MANCHESTER, MO 63011
314-361-1212
MARANAN, DIOSDADO L EM
4061 JEFFCO BLVD.
SUITE #4
ARNOLD, MO 63010
314-464-5474
MARAVILLA, LEVY M GP
4211 BAYLESS AVE
ST LOUIS, MO 63123
314-638-2448
MARBAN, MANUEL I CLP
4141 FOREST PARK
ST. LOUIS, MO 63108
314-531-3810
MARBARGER, JOHN P JR CDS
SUITE 3108 QUEENY TOWER
4989 BARNES HOSP PLAZA
ST. LOUIS, MO 63110
314-454-3457
MARCHOSKY, JOSE A NS
1507 CERULEAN DR
ST LOUIS, MO 63141
314-367-8787
MARCUS, MORRIS O D
8631 DELMAR BLVD
ST LOUIS, MO 63124
314-991-1174
MARCUS, ROBERT H EM
4989 BARNES HOSPITAL
ST. LOUIS, MO 63110
314-454-5229
MARDER, CAREY M IM
4713 LOGWOOD LANE
CHANTILLY, VA 22021
MARGOLIS, DAVID M GE
11155 DUNN RD.
ST. LOUIS, MO 63136
314-355-4010
MARGOLIS, RICHARD M PD
SUITE 490 DEPAUL PROF. BLDG.
12255 DEPAUL ORIVE
BRIDGETON, MO 63044
314-739-5333
MARGOLIS, ROBERT P N
11155 OUNN RD.
ST. LOUIS, MO 63136
314-355-3355
MARGULIES, THOMAS D IM
621 S NEW BALLAS RD
ST. LOUIS, MO 63141
314-432-3456
MARKIVEE, CARROLL R R
VETS AOMIN MEO CTR
915 N. GRAND
ST. LOUIS, MO 63106
314-443-2511
MARMOR, WM A OTO
1233 GUELBRETH LN
ST LOUIS, MO 63141
MARRS, DAVID B D
4950 AUOUBON AVE.
ST. LOUIS, MO 63110
314-454-2641
MARSH, JEFFREY L PS
500 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-2559
MARSHALL, JAY P II IM
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-878-6260
MARTEL, DOMINIQUE J AN
7344 PRINCETON AVE
ST LOUIS, MO 63130
314-965-7000
MARTIN, DANL J OBG
MERCY DOCTOR'S BLVD.
621 S NEW BALLAS RD
ST. LOUIS, MO 63141
314-432-8505
MARTIN, DAVID S R
1383 WHITE ORCHARD
ST LOUIS, MO 63141
314-865-3333

MARTIN, FREDERICK W OBG
325 N KIRKWOOD RD
ST LOUIS, MO 63122
314-966-4920

MARTINEZ, ARMANDO I ORS
122 GRAESER
CREVE COEUR, MO 63141

MARTIREZ, EMMANUEL R
224 MERAMEC STA RD
VALLEY PARK, MO 63088
314-225-5066

MARTZ, JOHN C PO
325 N KIRKWOOD RD
ST LOUIS, MO 63122
314-966-4555

MASSIE, EDWARD CD
9806 LITZSINGER ROAD
ST LOUIS, MO 63124

MASTERS, WM H OBG
4910 FOREST PARK BLDG
ST LOUIS, MO 63108
314-361-2377

MATHEW, MALEAKAL S CHP
10695 BELLEFONTAINE RD
ST LOUIS, MO 63137
314-867-3600

MATHEW, OOMMEN P PO
43 BACK BAY CIRCLE
GALVESTON, TX 77551
454-2141

MATHEW, POYANIL M P
1816 MANNINGTON CT.
CHESTERFIELD, MO 63017
314-644-8000

MATHEW, RUBY OBG
224 S. WOODSMILL RD.
CHESTERFIELD, MO 63017
314-878-2233

MATTHEWS, JOHN G IM
3707 WATSON RD
ST LOUIS, MO 63109
314-781-3886

MAUGHS, SYDNEY B P
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-721-8242

MAUPIN, KATHY C OBG
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6000

MAXWELL, RICHARD W IM
5257 LINDELL BLVD.
ST LOUIS, MO 63108

MAYER, ROBT A IM
3009 N. BALLAS RD.
SUITE #108
ST LOUIS, MO 63131
314-569-3990

MAYFIELD, ROSS AN
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-6880

MAYUGA, EDGARDO G AN
10010 KENNERLY RD
ST LOUIS, MO 63128
314-842-5600

MC ADAM, CHAS R FP
7516 FLORISSANT RD
ST LOUIS, MO 63121
314-381-0477

MC AFEE, C. ALAN GS
5505 DELMAR BLVD RM 300
ST LOUIS, MO 63112
314-367-8088

MC ALISTER, WM H R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-3115

MC CALL, EDWIN L US
22 HILLTOP DR
KIMBERLING CITY, MO 65686

MC CARTHY, CHRISTOPHER E IM
209 CARMEL WOODS
MANCHESTER, MO 63011
314-569-6000

MC CARTHY, JOHN M IM
1035 BELLEVUE AVE
ST LOUIS, MO 63117
314-645-2810

MC CAUGHAN, JOHN M GS
4605 LINDELL BLVD
ST LOUIS, MO 63108

MC CLENNAN, BRUCE L OR
510 SOUTH KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-2191

MC CLINTOCK, MARTIN B FP
14382 WOODLAKE
CHESTERFIELD, MO 63017
314-434-3333

MC CLOSKEY, R. BRUCE OTO
10004 KENNERLY
SUITE 140
ST LOUIS, MO 63128
314-849-3330

MC COOL, JAMES F IM
3915 WATSON RD
ST LOUIS, MO 63109
314-644-7100

MC COWN, ALLAN H R
9801 LOG CABIN CT
ST LOUIS, MO 63124
314-727-0012

MC DONALD, JAMES E R
510 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-2291

MC ELENEY, JAMES D EM
459 GLEN BROOK
W. HARTFORD, CT 06107

MC GINNIS, WM F OBG
224 SO. WOODS MILL RD
SUITE 450
CHESTERFIELD, MO 63017
314-434-2454

MC GUIRE, BERNARD J IM
615 SOUTH NEW BALLAS RD.
CREVE COEUR, MO 63141
314-569-6000

MC KEE, OLIVER A D
MCKEE DERMATOLOGY INC.
325 N. KIRKWOOD DR.
KIRKWOOD, MO 63122
314-966-2010

MC KELVEY, JOHN K PO
4440 LINDELL #203
ST. LOUIS, MO 63108
314-454-6000

MC KINNEY, JOE K P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-2266

MC LAREN, ANN L FP
109 W. PINE PLACE
ST. LOUIS, MO 63108
314-771-6325

MC LAUGHLIN, KATHLEEN S PTH
1824 TOPPING RD
ST LOUIS, MO 63131
314-344-6365

MC LEAN, ROYAL C GP
520 W JEWEL AVE
KIRKWOOD, MO 63122

MC MULLIN, FORBES A ORS
12615 OLD TESSON ROAD
ST LOUIS, MO 63128
314-849-0311

MC MURRAY, HERBERT C FP
356 WATFORD DR.
BALLWIN, MO 63011

MC NALLEY, MICHAEL OBG
10733 BIG BEND
ST LOUIS, MO 63122
314-821-1315

MC NAMARA, JOHN J R
21 BERKSHIRE
RICHMOND HEIGHT, MO 63117
314-645-2838

MEADOR, JAMES R GS
10367 OXFORD HILL DRIVE
ST LOUIS, MO 63141

MEADOWS, C. DOUGLAS OM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-6581

MEDLER, JOHN F OBG
2821 N BALLAS RD
ST LOUIS, MO 63131
314-872-9192

MEDLER, P. LOUIS D
1034 SOUTH BRENTWOOD
ST LOUIS, MO 63117
314-725-6267

MEHAN, DONALD J U
1035 BELLEVUE
ST LOUIS, MO 63117
314-644-6767

MEHRA, RACHNA PO
6651 CHIPPEWA SUITE 306
ST. LOUIS, MO 63109
314-644-3927

MEHRA, RAVI IM
10000 WATSON RD STE P
CRESTWOOD, MO 63126
314-822-4445

MEHRA, S K IM
6651 CHIPPEWA SUITE 306
ST LOUIS, MO 63109
314-644-3927

MEHRA, USHA OBG
10000 HIGHWAY 366
CRESTWOOD, MO 63126
314-822-4445

MEINBERG, WM H OPH
7052 MARYLAND AVE
ST LOUIS, MO 63130

MEINERS, DAVID J GS
1435 S. GRAND BLVD
ST. LOUIS, MO 63104
314-771-7600

MEINERS, PAUL N GS
1255 DEPAUL DR
SUITE 240
BRIDGETON, MO 63044
314-739-6650

MEINERS, THEODORE M OBG
224 S. WOODS MILL RD.
CHESTERFIELD, MO 63017
314-576-0930

MELICK, WM F U
911 S BRENTWOOD #228
ST LOUIS, MO 63105
314-725-6551

MELL, ROGER L ORS
224 S. WOODS MILL ROAD
SUITE 255
CHESTERFIELD, MO 63017
314-434-3240

MELSON, G. LELAND OR
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-2191

MELTZER, DAVID W OPH
660 S. EUCLID
ST LOUIS, MO 63110
314-454-3104

MELZER, JULIET S GS
3226 MYRA ST. APT. D
DURHAM, NC 27707
314-454-2219

MENDELSOHN, GEORGE NS
5505 DELMAR
ST LOUIS, MO 63112
314-367-8787

MENDELSOHN, ROBT S IM
522 N. NEW BALLAS
ST LOUIS, MO 63141
314-567-1902

MENDELSON, DAVID F N
141 N MERAMEC AVE
ST LOUIS, MO 63105
314-726-3202

MENDONSA, LAWRENCE E OBG
9811 W FLORISSANT BLVD
ST LOUIS, MO 63136
314-522-3443

MENESES, ORLANDO G FP
11327 GRAVOIS
ST LOUIS, MO 63126
314-843-3337

MERENDA, FRANK J ORS
777 S. NEW BALLAS RD.
CREVE COEUR, MO 63141
314-567-5850

MERENDA, SAM J R
6651 CHIPPEWA
ST LOUIS, MO 63109
314-647-8893

MERKEL, JOHN U FP
615 S. NEW BALLAS
ST. LOUIS, MO 63141
314-569-6010

MERRIMS, THEODORE OBG
8631 DELMAR BLVD
ST LOUIS, MO 63124
314-993-5563

MERRITT, BURCH A PO
12937 TIMMOR CT
ST LOUIS, MO 63131
314-383-2953

MERRITT, DIANE F OBG
4911 BARNES HOSPITAL PLAZA
ST. LOUIS, MO 63110
314-454-2330

MESTRES, HUGH M PO
12660 LAMPLIGHTER SQ
ST LOUIS, MO 63128
314-842-0330

MEYER, HARRY E P
522 N. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-659-1717

MEYER, HERMAN M IM
6215 PERSHING AVE
ST LOUIS, MO 63130

MEYER, JAMES E FP
USAF CLINIC
ANDERSEN AFB, GUAM APO
SAN FRANCISCO, CA 96334

MEYER, JAY P
763 S. NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0212

MEYER, JOHN S CLP
216 S KINGSHIGHWAY
ST. LOUIS, MO 63110
314-454-7190

MEYER, MELVIN E OPH
4424 HAMPTON ST
ST LOUIS, MO 63109
314-351-2600

MEYER, ROBERT C GS
5869 WALSH
ST. LOUIS, MO 63109
314-644-6300

MEYER, WAYNE W GS
12255 DEPAUL DR.
SUITE 755
ST. LOUIS, MO 63044
314-739-6060

MEYERS, ELSIE F AN
6364 ALEXANDER DR
CLAYTON, MO 63105
314-454-2858

MEYERS, JOHN B IM
120 N. FORSYTH BLVD
CLAYTON, MO 63105
314-726-2425

MEYERS, ROBT W P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
314-367-8424

MICHAEL, VERNON E GS
SUITE 343-FRISCO BLDG.
906 OLIVE
ST LOUIS, MO 63101
314-421-4004

MICHAELREE, JOHN F FP
921 LA CHERIE
MANCHESTER, MO 63011

MIDDLETON, JERRY N OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
314-569-0055

MIER, THOS M OBG
900 OAKHAVEN
COLUMBIA, MO 65201
314-445-3242

MIKHAIL, GEORGE OBG
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
314-776-6095

MIKOLAJCZAK, JAMES P
10004 KENNERLY RD.
SUITE 255
ST LOUIS, MO 63128
314-842-6440

MILDER, BARRY D OPH
211 N MERAMEC AVE
CLAYTON, MO 63105
314-727-4000

MILDER, BENJ OPH
10 TERRYHILL LANE
ST LOUIS, MO 63131
314-727-4000

MILES, PAUL W OPH
15 RIDGE CREEK RD
ST LOUIS, MO 63141

MILL, WM B TR
1325 S. GRAND
DEPT OF RADIATION, ONC.
ST. LOUIS, MO 63104
314-773-2293

MILLANGUE, CONSOLACION P IM
8059 WATSON RD
WEBSTER GROVES, MO 63119
314-961-8207

MILLANGUE, RAFAEL M GS
8059 WATSON RD
WEBSTER GROVES, MO 63119
314-961-8206

MILLER, CHAS JR IM
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
314-821-9150

MILLER, EDWARD J IM
522 N NEW BALLAS STE 34
ST LOUIS, MO 63141
314-567-3113

MILLER, GEOFFREY W R
60 BERKSHIRE
ST LOUIS, MO 63117
314-441-6730

MILLER, JAMES E OPH
ST LOUIS CHILDRENS HOSP
500 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-545-6024

MILLER, JAMES R PTH
99 TRENT DR
ST LOUIS, MO 63124
314-645-1960

MILLER, JULE P P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
314-367-2660

MILLER, ROBT N AN
621 S. NEW BALLAS RD.
ST LOUIS, MO 63141
314 569-6880

MILLER, WM V CLP
4050 LINDELL BLVD
ST LOUIS, MO 63108
314-658-2131

MILSTEAD, KENNETH L AN
4817 DORSET AVE
CHEVY CHASE, MD 20015

MILSTER, CLYDE R OPH
7443 HIBBARD LANE
ST LOUIS, MO 63123

MINKOFF, I. MONICA HEM
#6 JUNGERMANN CIRCLE
ST PETERS, MO 63376
314-441-7474

MINNIHAN, ROBT W P
141 N. MERAMEC
ST LOUIS, MO 63105
314-469-1452

MIRBAHA, MITCHELL M ORS
4110 VON TALGE RD
ST LOUIS, MO 63128
314-894-2404

MISCHNICK, CAROL R PS
10004 KENNERLY RD
ST. LOUIS, MO 63128
314-842-5885

MISHKIN, MARVIN R ORS
522 N NEW BALLAS RD
ST LOUIS, MO 63141
314-432-2323

MISKOVSKY, EMIL F IM
12255 DEPAUL DR. SUITE 865
BRIDGETON, MO 63044
314-291-7730

MISSEY, WILBURN C IM
2439 BAXTON WAY
CHESTERFIELD, MO 63017

MISTRY, TEHMTON S OBG
35 N CENTRAL
ST LOUIS, MO 63105
314-727-3439

MITCHELL, JOHN S IM
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-569-6000

MITHEN, FRANCIS A N
3877 MARIETTA
ST LOUIS, MO 63121
314-454-2401

MODIN, JEFFREY J CHN
11745 OLIVE ST. RD
ST. LOUIS, MO 63141
314-569-0720

MOELLER, DELBERT OBG
777 S. NEW BALLAS RD
ST LOUIS, MO 63141
314-872-7798

MOHS, FRANK R IM
12303 DEPAUL DR.
BRIDGETON, MO 63044
314-344-6264

MOLDEN, C. SCOTT S IM
ST. LOUIS MEDICAL CLINIC
3009 N. BALLAS RD.
ST LOUIS, MO 63131
314-432-1111

MOLDEN, CHAS A FP
7520 NATURAL BRIDGE RD
ST LOUIS, MO 63121
314-385-4555

MOLITOR, JEROME A R
13427 LAND O WOODS
CREVE COEUR, MO 63141
314-622-5000

MOMTAZEE, SAM OBG
224 S. WOODS MILL RD.
ST LOUIS, MO 63017
314-878-1700

MONAFO, WM W GS
WASHINGTON UNIV.
4960 AUDUBON
ST LOUIS, MO 63110
314-454-2080

MONAT, SEYMOUR M OBG
8631 DELMAR BLVD
ST LOUIS, MO 63124
314-993-3881

MONSEES, BARBARA R
478 W LOCKWOOD AVE.
ST. LOUIS, MO 63119
314-454-2000

MONTANI, CHAS FP
5147 DAGGETT AVE
ST LOUIS, MO 63110
314-771-4082

MONTERUBIO, FRED R JR OBG
10449 ST. CHARLES ROCK RD.
ST. ANN, MO 63074
314-429-1900

MONTES, ARTURO C FP
4585 WASHINGTON
SUITE C-4
FLORISSANT, MO 63033
314-921-4550

MONTES-DE-OCA, JULIO IM
950 FRANCIS PL
CLAYTON, MO 63105
314-726-2828

MONTGOMERY, AUSTIN F IM
3009 N. BALLAS RD.
SUITE 107
ST LOUIS, MO 63131
314-872-8225

MOOLSINTONG, PORNCHAI R
447 TWIN CREEK RD.
ST. LOUIS, MO 63141
314-768-8250

MOON, THOS R JR N
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
314-965-1844

MOORE, ALVA IM
5142 RAYMOND AVE
ST LOUIS, MO 63113

MOORE, HARRY G JR CHP
141 N MERAMEC
#107
ST LOUIS, MO 63105
314-726-2770

MOORE, HARRY G SR FP
245 UNION BLVD. APT. 221
ST LOUIS, MO 63108
314-367-9280

MOORE, WALTER L N
215 N. CENTRAL AVE.
CLAYTON, MO 63105
314-725-1522

MORA, ALVARO OBG
11119 SCHUETZ RD.
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MORGAN, STEPHAN S OPH
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EAST ST. LOUIS, IL 62205
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BRIDGETON, MO 63044
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MORITZ, MARK W GS
8729 DELMAR BLVD.
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MORRISON, ARLEN E IM
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MOTCHAN, DENNIS G IM
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7071 LINDELL BLVD.
ST LOUIS, MO 63130

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12494 TESSON FERRY RD.
ST. LOUIS, MO 63128
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MULLARKY, WILBUR A IM
10646 ST CHARLES ROCK RD
ST ANN, MO 63074
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3957 HOLLY HILLS BLVO
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OCHOA, PEORO GS
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OGURA, JOS H OTO
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OHLMS, OAVIO L P
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9465 CROOKEO CREEK TRAIL
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4949 BARNES HOSP. PLAZA
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ONG, OFELIA S OBG
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ONKEN, HENRY D PS
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ST. ANTYONY'S MEO CTR.
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314-991-1078

PEREZ, CARLOS A R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-2134

PEREZ, ROBERT J IM
533 COUCH AVENUE
ST. LOUIS, MO 63122
314-966-0500

PEREZ, ROMEO J OBG
3009 N BALLAS RO.
ST. LOUIS, MO 63131
314-872-3743

PERINETTI, ENRIQUE P U
11155 OUNN RO.
#2 OFFICE
ST. LOUIS, MO 63136
314-355-5544

PERKINS, OAVIO E OR
1034 S 8RENTWOOO
ST LOUIS, MO 63117
314-727-0012

PERLMUTTER, STEVEN 8 OPH
517 S. EUCLIO AVE.
ST. LOUIS, MO 63110
314-454-2432

PERNOUO, FLAVIUS G III OPH
1031 8ELLEVUE AVE.
ST LOUIS, MO 63117
314-644-6666

PERNOUO, FLAVIUS G JR OPH
1031 8ELLEVUE
ST LOUIS, MO 63117
314-644-6666

PERNOUO, JOAN M OPH
6735 WESTWAY ROAO
ST LOUIS, MO 63109
314-353-0016

PERNOUO, MICHAEL F OPH
1031 BELLEVUE
SUITE 501
ST LOUIS, MO 63117
314-644-6666

PERRY, H. MITCHELL JR. IM
VA MEOICAL CENTER
1110 JC
ST LOUIS, MO 63125
314-652-4100

PERRY, WM O IM
1034 S BRENTWOOO BLVO
ST LOUIS, MO 63117
314-721-0666

PESKIN, EOWARO G O8G
100 N. EUCLIO AVE.
ST LOUIS, MO 63108
314-658-5251

PETERSON, FREOERICK O PO
8025 OALE AVE
ST LOUIS, MO 63117
314-644-2566

PETERSON, GARY J GS
1325 S. GRANO
OEPT. OF SURGERY
ST LOUIS, MO 63104
314-771-7600

PETKOVICH, FRANK O ORS
11155 OUNN RO.
ST. LOUIS, MO 63136
314-355-7717

PETRUSKA, PAUL J IM
367 CONWAY LAKE OR.
ST LOUIS, MO 63141
314-771-7600

PHILIP, VARKEY E EM
525 COUCH AVE
KIRKWOOO, MO 63122
314-966-1528

PHILLIPS, ABRAHAM M PO
777 S NEW BALLAS RO
ST LOUIS, MO 63141
314-567-9180

PHILLIPS, HANFORO IM
6828 OAKLANO AVE
ST LOUIS, MO 63139
314-647-6313

PHILLIPS, JOHN J ORS
12255 OE PAUL OR
8RIOGETON, MO 63044
314-739-7654

PHILLIPS, WM J IM
5505 OELMAR
ST LOUIS, MO 63112
314-454-1500

PHILPOTT, GOROON W GS
216 SOUTH KINGSHIGHWAY
ST LOUIS, MO 63110
314-454-7170

PHIPATANAKUL, CHINTANA S IM
1125 GRAHAM RO
FLORISSANT, MO 63031
314-838-5700

PHIPATANAKUL, SUPOTE OTO
135 W AOAMS
ST LOUIS, MO 63122
314-966-6656

PHO, MUI O EM
3216 W. AOAMS
ST. CHARLES, MO 63301
314-367-3770

PICCIONE, LEONARO N FP
2377 8ROAOMONT CT
CHESTERFIELO, MO 63017
314-291-7223

PIERRON, ROBERT L ORS
805 BITTERFIELO
BALLWIN, MO 63011
314-394-2349

PIETZ, JEFFREY T PO
703 COUNTRY MANOR LANE
CREVE COEUR, MO 63141
314-878-3118

PILEPICH, MILIENKO V R
4511 FOREST PARK
ST. LOUIS, MO 63108
314-454-3381

PILLA, LAWRENCE A R
#7 HOMELANO PL
ST LOUIS, MO 63109
314-645-2833

PIMENTEL, ESPERANZA M FP
2323 CHAMBERS
ST LOUIS, MO 63136
314-867-2736

PIMENTEL, MAURICIO F FP
VA HOSPITAL
915 NO GRANO
ST LOUIS, MO 63125
314-867-2736

PINEOA, HECTOR O IM
4201 HEREFORO
ST LOUIS, MO 63109
314-481-8028

PIPER, AUGUST T IM
4903 MARTIN LUTHER KING
ST LOUIS, MO 63113
314-367-2350

PITSINGER, N. BRUCE GS
224 S. WOOOS MILL RO.
SUITE 540
CHESTERFIELO, MO 63017
314-878-0848

PITTMAN, GERALO R PTH
5 HIGH ACRES OR
ST LOUIS, MO 63132
314-968-1616

PITTMAN, SUSAN PO
2821 N. 8ALLAS RO.
ST LOUIS, MO 63131
314-567-0016

PIZZIMBONO, CARLOS A GS
1212 BROADWAY
HIGHLANO, IL 62249
618-654-9851

PLAX, STEVEN I PO
8025 OALE
ST LOUIS, MO 63117
314-644-2566

POLINENI, SUBBARAO GS
6500 CHIPPEWA
ST. LOUIS, MO 63109
314-832-7227

POLITO-COLVIN, JUANITA C PO
2635 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-367-6880

PON, MARCELINO FP
2928 HIGH RIOGE BLVO.
HIGH RIOGE, MO 63049
314-677-5711

PONNURU, BHASKARA M AN
13100 THORNHILL OR.
ST. LOUIS, MO 63131
314-849-2488

POPP, OENNIS A IM
1402 S. GRANO BLVO.
ST. LOUIS, MO 63104
314-664-9800

PORPORIS, ARTHUR A R
824 RENOERER OR
ST LOUIS, MO 63122
314-361-7373

PORTNOY, JOSEPH L PO
14377 WOOOLAKE OR.
CHESTERFIELO, MO 63017
314-878-8390

PORTUGAL, ANTONIO Q GS
6500 CHIPPEWA STE 211
ST LOUIS, MO 63109
314-352-8881

PORTUONOO, 8ONAVENTURE C PTH
3532 FLORA COURT
ST LOUIS, MO 63104

POST, STEPHEN L P
4524 FOREST PARK APT 20
ST LOUIS, MO 63108
314-361-8333

POTASHNICK, ROBT IM
12255 OE PAUL OR
SUITE 865
BRIOGETON, MO 63044
314-291-7730

POTTER, REESE H P
100 N EUCLIO AVE
ST LOUIS, MO 63108
314-291-5054

POTTS, DAN E IM
114 NORTH TAYLOR AVE
ST LOUIS, MO 63108
314-454-1500

POWELL, CHARLES B ORS
1125 GRAHAM RO
FLORISSANT, MO 63031
314-838-5700

POWELL, EARL A U
11114 PALMERAS OR
SUN CITY, AZ 85351

POWELL, JOHN A O
1034 S. BRENTWOOO 8LVO.
ST LOUIS, MO 63117
314-863-7080

POWERS, PIERCE W GS
5203 CHIPPEWA ST
ST LOUIS, MO 63109
314-832-4321

PRENSKY, ARTHUR L CHN
OEPT OF PEOIATRICS
500 S KINGSHIGHWAY
ST LOUIS, MO 63178
314-454-6084

PRESNELL, CLEITUS A OTO
6744 CLAYTON RO
ST LOUIS, MO 63117
314-645-3700

PRICE, KENNETH C IM
5505 DELMAR- ROOM 201
ST LOUIS, MO 63112
314-361-2910

PROBST, RAYMONO E OBG
10345 WATSON RO
ST LOUIS, MO 63127
314-965-6033

PROBSTEIN, JACOB G GS
4943 LINOELL 8LVO
ST LOUIS, MO 63108
314-367-3822

PROPHETE, BEAUMANOIR U
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ST LOUIS, MO 63108
314-361-3777
PROSKEY, VINCENT J IM
522 N NEW BALLAS RO
ST LOUIS, MO 63141
314-567-3113
PROSSER, JOSEPH S IM
10713 SAWARA OR.
PENSACOLA, FL 32506
904-452-6744
PRUETT, BURCHARO S OS
10321 RICHVIEW OR
ST LOUIS, MO 63127
PRUETT, OON S GS
10 LOG CABIN OR
ST LOUIS, MO 63124
314-726-5225
PURCELL, HARRY K GS
911 S BRENTWOOO BLVD
ST LOUIS, MO 63105
314-725-4747
PURCELL, JOHN J JR OPH
6744 CLAYTON RO
ST LOUIS, MO 63117
314-647-2277
PURO, EOWARD A IM
11115 NEW HALLS FERRY RO
FLORISSANT, MO 63033
314-838-0222
QUAOIR, HUMAYUM IM
10004 KENNERLY RO
ST LOUIS, MO 63128
314-843-3449
QUICK, RICHARO T P
9821 COPPER HILL ROAO
ST LOUIS, MO 63124
314-567-5185
QURESHI, ABDUL R IM
10004 KENNERLY ROAO
ST LOUIS, MO 63128
314-843-7333
RACAOIO, SEVERO M FP
P. O. BOX 1
ARNOLO, MO 63010
314-296-5522
RACHLIN, MAXWELL OPH
211 N MERAMEC
ST LOUIS, MO 63105
314-727-4240
RAOER, EOWARO S U
7744 OAVIS OR.
CLAYTON, MO 63105
314-727-7717
RAOER, GEO B GS
224 S. WOOOS MILL RO.
SUITE 430
CHESTERFIELO, MO 63017
314-576-0060
RAFFA, M. ALI GS
6651 CHIPPEWA
ST. LOUIS, MO 63109
314-781-1580
RAHMAN, MOUOUOUR OPH
911 S BRENTWOOO
ST LOUIS, MO 63105
314-725-7373
RAICHLE, MARCUS E N
710 JAMAICA CT
ST LOUIS, MO 63122
314-454-3596
RAIKAR, SUDHIR R PO
3200 S. 13TH ST.
ST. LOUIS, MO 63118
314-771-6776
RAILEY, MICHAEL T FP
1755 S. GRANO
ST. LOUIS, MO 63104
314-771-0045
RAINEY, ROBT GS
5165 LINOELL BLVD
ST LOUIS, MO 63108
314-428-8100
RAJA-SEKHAR, RUORAIAH AN
1325 S. GRAND 8LVO.
ST. LOUIS, MO 63104
314-771-7600
RAMIREZ, SAML G IM
11921 SACKSTON RIDGE DR
ST LOUIS, MO 63141
314-385-9111
RAMSEY, MARY L P
1325 S. GRAND
ST. LOUIS, MO 63104
314-771-7600
RAMSEY, ROBT H IM
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
314-921-2060
RANDOLPH, BERNARO C FP
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
314-383-1746
RANKIN, OIANE CHP
4521 PERSHING ST
ST LOUIS, MO 63108
314-367-4234
RAO, ASWATH N ORS
6500 CHIPPEWA ST
ST LOUIS, MO 63109
314-351-1610
RAO, CARLO GS
11639 W. FLORISSANT
FLORISSANT, MO 63033
314-921-6200
RAO, OEVINENI V R
4511 FOREST PARK BLVO.
ST. LOUIS, MO 63108
314-454-3381
RAO, SHANKAR N FP
10822 ST CHARLES ROCK RO
ST ANN, MO 63074
314-729-0330
RAO, SUMATI PTH
2269 FAIROYAL OR.
ST. LOUIS, MO 63131
314-771-7600
RAPPAZZO, JOSEPH A OPH
4989 BARNES HOSPITAL PLAZA
ST. LOUIS, MO 63110
314-454-2000
RAPPOLO, HENRY O OBG
500 NORTHWEST PLAZA
ST ANN, MO 63074
314-291-0040
RATKIN, GARY A HEM
4910 FOREST PARK #202
ST LOUIS, MO 63108
314-361-7786
RAYBUCK, HARRY E OBG
1245 GRAHAM RO.
FLORISSANT, MO 63031
314-838-8383
REAROON, THOS F IM
300 S. GRANO
ST LOUIS, MO 63103
314-658-5049
RECANO, RICAROO Q FP
4440 NAZARETH HILLS OR
ST LOUIS, MO 63129
314-352-5200
REOOY, OYAPA S PO
430 WHITREE LANE
CHESTERFIELD, MO 63017
314-865-4000
REOOY, M V N
5400 ARSENAL ST
ST LOUIS, MO 63139
314-644-8802
REOOY, PALLE K AN
660 S. EUCLIO AVE.
ST. LOUIS, MO 63110
314-454-2858
REDOY, RANGA V AN
376 COUNTRY GLEN LANE
ST. LOUIS, MO 63141
314-771-7600
REOINGTON, JAMES C JR IM
911 S BRENTWOOD
ST LOUIS, MO 63105
314-727-5336
REOLER, BRUCE H OPH
660 SOUTH EUCLIO
BOX 8096
ST. LOUIS, MO 63110
314-454-2640
REEO, JOHNATHAN R OBG
100 N. EUCLIO AVE
ST LOUIS, MO 63108
314-367-2200
REEO, LESLIE G FP
VA HOSPITAL
170 - J C
ST LOUIS, MO 63125
314-652-4100
REESE, A VICTOR IM
120 E LOCKWOOD AVE
WEBSTER GROVES, MO 63119
314-962-2218
REESE, LESTER T D
522 N NEW BALLAS RD-STE
ST LOUIS, MO 63141
REEVES, GLEN I TR
USAF MEO CTR.
HMR 1739
KEESLER AFB, MS 39534
601-377-6291
REH, EDWARD P JR. IM
533 COUCH
ST. LOUIS, MO 63122
314-965-5868
REH, THOS E R
6420 CLAYTON RO
ST LOUIS, MO 63117
314-644-3000
REHM, CHARLES H JR IM
621 S. NEW BALLAS
SUITE 611
CREVE COEUR, MO 63141
314-569-3161
REICHERT, M. CECELIA IM
10063 ELISE OR
ST LOUIS, MO 63123
314-752-8349
REICHERT, TIMOTHY J OTO
777 S. NEW BALLAS RD.
ST. LOUIS, MO 63141
314-872-8338
REIOER, RICHARO A IM
353 RUE RENER
ST LOUIS, MO 63122
314-569-6780
REINECK, JOHN A OM
5410 RHOOES
ST LOUIS, MO 63109
REINEKE, FREO W PTH
OFFUTT AFB
OMAHA, NE 68113
REINHARO, EOWARO H IM
4989 BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-454-2867
REISLER, OAVIO M N
224 SO WOODS MILL RO.
SUITE 550
CHESTERFIELO, MO 63017
314-434-3414
REITER, FEOERICO B OR
11155 OUNN RO
ST LOUIS, MO 63136
314-355-6565
REITMAN, STANLEY IM
158 MAYFAIR PLAZA
FLORISSANT, MO 63033
314-355-5300
REJENT, ANTHONY J PD
4211 BAYLESS RO
ST LOUIS, MO 63123
314-638-4010
RENOLEMAN, GEO F JR GS
818 OLIVE ST
#1023
ST LOUIS, MO 63101
314-241-9261
RENOLEMAN, GEO F SR GS
818 OLIVE ST
#1023
ST LOUIS, MO 63101
314-241-9261
RENNARO, MARVIN OBG
2821 N BALLAS RO STE 25
ST LOUIS, MO 63131
314-872-9206
REPP, THEODORE J JR FP
158 MAYFAIR PLAZA
FLORISSANT, MO 63033
314-355-5300
REUTER, LOUIS A OM
911 S BRENTWOOO BLVO
SUITE 100
ST LOUIS, MO 63105
314-862-2211
REYES, JOSE T AN
455 STEEPLE CHASE LANE
ST LOUIS, MO 63131
314-842-5600
REYES, LUIS A GS
9814 MAR-ANN CT
ST LOUIS, MO 63128
314-296-1861
REYES, ROSENOO A OBG
10157 HAUSFEL CT.
ST. LOUIS, MO 63128
314-343-9489
REYNOLOS, FREOERICK C ORS
10094 BRIARWOOO OR.
ST. LOUIS, MO 63124
314-576-7013
REYNOLOS, JAMES A IM
224 S. WOOOS MILL RO.
CHESTERFIELO, MO 63017
314-878-7220
RHEE, DONG S AN
P. O. BOX 24507
ST LOUIS, MO 63141
314-872-8221
RHEE, SEOUNG E FP
3551 EVERGREEN LANE
ST LOUIS, MO 63125
314-892-6789
RIBAUDO, J. MICHAEL PS
456 N NEW BALLAS RD
SUITE 266
ST LOUIS, MO 63141
314-569-3662
RICHARDS, FRANK O GS
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
314-383-0133
RICHARDSON, THOS F P
4949 8ARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-367-4500
RICHMOND, MICHAEL R IM
1542 WOOOLAKE OR.
CHESTERFIELO, MO 63017
314-434-0770
RIOGEWAY, WM G OPH
6651 CHIPPEWA
ST LOUIS, MO 63109
314-645-4940
RIES, DOUGLAS A GS
1511 HAMPTON HALL DR. #12
CHESTERFIELO, MO 63017
RIGGIO, SALVATORE N PO
10349 WATSON RD
ST LOUIS, MO 63127
314-821-0349

RILEY, JOHN J IM
12255 DEPAUL DR
SUITE 345
BRIDGETON, MO 63044
314-739-4166

RINER, RONALD N IM
ST. MARYS HEALTH CTR.
6420 CLAYTON
ST. LOUIS, MO 63117
314-768-8895

RING, EDWARD M TS
522 N NEW BALLAS RD
SUITE 344
ST LOUIS, MO 63141
314-567-4111

RINGENBERG, BEVERLY J EM
ST. MARY'S HOSP.
6420 CLAYTON RD.
ST. LOUIS, MO 63117
314-644-5612

RITCHIE, FRANCES R GP
720 OLIVE ST 24TH FLOOR
ST LOUIS, MO 63101

RITTER, HUBERT A OBG
1035 BELLEVUE
RICHMOND HEIGHT, MO 63117
314-644-6262

RIZZO, ADOLFO E CHP
9216 CLAYTON RD STE 105
ST LOUIS, MO 63124
314-991-2466

ROARK, PAUL M OPH
187 CONCORD PLAZA
ST LOUIS, MO 63128
314-842-3273

ROBBEN, G. GARRY IM
2821 N. BALLAS RD
ST LOUIS, MO 63131
314-872-3380

ROBBINS, PHILIP L CRS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-567-9930

ROBERTS, HAROLD K IM
434 S HANLEY RD
CLAYTON, MO 63105
314-725-6303

ROBERTS, JOHN L PD
500 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
314-367-6880

ROBERTS, JOHN P IM
3015 BARRETT STATION RD
KIRKWOOD, MO 63122
314-965-6885

ROBERTS, LAURETTA OBG
1916 SHADOW WOOD CT
CHESTERFIELD, MO 63017
314-838-5700

ROBERTSON, FRANK G OBG
456 N. NEW BALLAS RD
ST LOUIS, MO 63141
314-569-2022

ROBINSON, EDITH C CHP
BRIAR OAK
ST LOUIS, MO 63132

ROBLEE, MELVIN A OBG
WESTMINSTER-CANTERBURY HS
1600 WESTBROOK APT 228
RICHMOND, VA 23227

ROCHE, MAURICE B ORS
4400 LINDELL BLVD
APT. 3M
ST LOUIS, MO 63108

RODEN, VERNON J PD
456 N NEW BALLAS RD
ST LOUIS, MO 63141
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RODRIGO, BERNARDO R AN
12537 ROYAL MANOR
ST LOUIS, MO 63141
314-644-3000

RODRIGUEZ, UBALDO R GS
2650 TELEGRAPH RD
ST LOUIS, MO 63125
314-892-3502

ROGERS, HUNTER B FP
819 LOCUST ST
ST LOUIS, MO 63101
314-621-4300

ROHRBAUGH, JAMES R CHN
11745 OLIVE ST. RD.
ST. LOUIS, MO 63141
314-569-0720

ROLLO, JOHN L PTH
11133 DUNN RD.
ST. LOUIS, MO 63136
314-355-2300

ROOS, ALBERT AN
660 S EUCLID
ST LOUIS, MO 63110
314-454-3133

ROPER, CHAS L CDS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
314-361-0122

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950 FRANCIS PL
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ROSENBAUM, HARRY D OPH
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ST LOUIS, MO 63141
314-569-1557

ROSENBAUM, HERBERT E N
456 N NEW BALLAS #290
ST LOUIS, MO 63141
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BELLEVILLE, IL 62223

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314-367-8811

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1209 BETHESDA
ST LOUIS, MO 63117

ROSENTHAL, RANDALL P
2222 SCHUETZ RD
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314-997-1722

ROSS, WM J PD
119 CHURCH ST
ST LOUIS, MO 63135
314-521-1600

ROTH, JOHN J IM
522 N NEW BALLAS-STE 24
ST LOUIS, MO 63141
314-872-7332

ROTHWEILER, ROBT J OTO
11745 OLIVE ST RD
ST LOUIS, MO 63141
314-567-3618

ROTSKOFF, KENNETH S OS
911 S BRENTWOOD
ST LOUIS, MO 63105
314-863-8050

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SEA ISLAND, GA 31561

ROUSE, ERNEST T IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
314-721-0666

ROUSE, ERNEST T III IM
1034 S BRENTWOOD
ST LOUIS, MD 63117
314-721-0666

ROUSH, GEO OM
800 N LINDBERGH
ST LOUIS, MO 63166
314-694-8800

ROY, JOS A GS
12255 DEPAUL DR
BRIDGETON, MO 63044
314-738-7773

ROY, TAPANKUMAR S TR
DEPT OF RADIATION ONC
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
773-2293

ROYCE, ROBT K U
766 HIGH HAMPTON RD
ST LOUIS, MO 63124
314-367-1820

ROYSTON, GRANDISON D OBG
RT #4 BOX 330H
HOPE, AR 71801

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ST LOUIS, MO 63122
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RUBIN, ROBT IM
4585 WASHINGTON ST
FLORISSANT, MO 63033
314-837-1515

RUEHL, ALBERT F PS
3555 SUNSET OFFICE DR.
ST LOUIS, MO 63127
314-821-3900

RUHLING, RUDY GP
5203 CHIPPEWA
ST LOUIS, MO 63109
314-481-1562

RUMELT, MICHAEL OPH
BALLAS-PARKWAY MEDICAL
456 N NEW BALLAS RD-
CREVE COEUR, MO 63141
314-432-2156

RUNDE, CHARLES W FP
1201 HOLGATE
BALLWIN, MO 63011
314-569-6010

RUSAN, THOS E OBG
7911 BENNETT AVE.
ST LOUIS, MO 63117

RUSSELL, HERMAN E ORS
4451 NATURAL BRIDGE
ST LOUIS, MO 63115
314-389-7150

RUWITCH, JOSEPH F JR IM
16413 BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-454-3603

RYALL, JO-ELLYN M P
SUITE 1160
1034 S. BRENTWOOD BLVD.
ST. LOUIS, MO 63117
314-721-8242

RYAN, ROBERT E JR OTO
621 S. NEW BALLAS RD
ST. LOUIS, MO 63141
314-872-8778

RYAN, ROBT E SR OTO
621 S NEW BALLAS RD
ST LOUIS, MO 63141
314-872-8778

RYAN, THOMAS E IM
11155 DUNN RD.
ST. LOUIS, MO 63136
314-355-5597

SABET, ABDOLLAH A P
901 CLAYTON RD.
BALLWIN, MO 63011
314-227-7300

SACHAR, LEO A GS
4910 FOREST PARK BLVD
#206
ST LOUIS, MO 63108
314-361-3676

SAFDAR, SHABBIR H ONC
4989 BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
314-454-5000

SAFFA, J. DENNIS IM
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4511 FOREST PARK BLVD
ST LOUIS, MO 63108
314-367-530B
WALENTIK, CORINNE PO
1515 LAFAYETTE AVE.
ST LOUIS, MO 63104
314-622-5361
*WALKER, DAVIO BROOKS O
11245 ST. CHARLES ROCK RO.
BRIDGETON, MO 63044
314-739-6300
WALKER, FRANCIS S NS
1035 BELLEVUE AVE
ST LOUIS, MO 63117
314-644-6565
WALKER, HARVEY JR IM
138 N MERAMEC AVE
CLAYTON, MO 63105
314-721-7227
WALKER, J. LESLIE OBG
522 N NEW BALLAS RD
CREVE COEUR, MO 63141
314-567-6580
WALKER, WILLARO B GS
1034 S BRENTWOOO BLVD
ST LOUIS, MO 63117
314-727-2011
WALL, EMMETT O IM
5823 NOESHO
ST LOUIS, MO 63109
WALL, LESTER E PDA
533 COUCH
KIRKWOOO, MO 63122
314-821-2100
WALLACK, MARC K GS
4960 AUDUBON AVE
ST LOUIS, MO 63110
314-454-2919
WALSH, JAMES W IM
1034 S BRENTWOOO BLVO
ST LOUIS, MO 63117
314-721-0666
WALTER, KENNETH E CO
918B RUSTICWOOD TRAIL
ST LOUIS, MO 63126
314-652-4100
WALTER, WM L OPH
135 W AOAMS
ST LOUIS, MO 63122
314-966-2500
WALTERS, HARuLO E GS
6B28 OAKLANO
ST LOUIS, MO 63139
314-645-7636
WALTERS, HENRY W O
35 N CENTRAL AVE
CLAYTON, MO 63105
314-727-2662
WALTERS, RICHARO C US
7511 BIG BENO BLVO
WEBSTER GROVES, MO 63119
WALTHER, ROY A JR OBG
9440 MIDLANO
ST LOUIS, MO 63114
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WALTMAN, STEPHEN R OPH
342 MAGNA CARTA OR
ST LOUIS, MO 63141
314-454-3104
WALZ, BRUCE J TR
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314-385-3600
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1539 WOODROYAL WEST OR
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911 S BRENTWOOD BLVD
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ST. LOUIS, MO 63105
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WOLFF, RAY J P
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ST. LOUIS, MO 63141
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3442 GERALDINE
ST LOUIS, MO 63115
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CLAYTON, MO 63105
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WOOL, GERALD PD
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ST LOUIS, MO 63117
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WOOLSEY, JOYCE E PD
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ST LOUIS, MO 63117
314-725-1522
WOOLSEY, ROBT M N
1325 S GRAND BLVD
ST LOUIS, MO 63104
314-771-7600
WOTAWA, WM J OBG
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314-481-7224
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ST LOUIS, MO 63110
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120 CAMELOT DR
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103 N TAYLOR AVE
KIRKWOOD, MO 63122
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YALCIN, ENVER IM
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ST LOUIS, MO 63128
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YANG, CHAO-YUNG AN
6420 CLAYTON RD.
ST. LOUIS, MO 63177
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YAZDI, TOM M OBG
16 HAMPTON VILLAGE PLAZA
ST LOUIS, MO 63109
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8548 BRYAN AVE.
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314-644-0256
YORE, RICHARD W TS
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YOSELEVSKY, ROBERT OPH
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TOWN & COUNTRY, MO 63141
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314-531-2288

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12 COUNTRY AIRE
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YOUNGER, ERNEST GP
12 COUNTRY AIRE
ST LOUIS, MO 63131
ZACK, PAUL M IM
1751 LEGEND LANE
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ZAHORSKY, THEODORE S PD
800 S HANLEY RD-APT 3B
ST LOUIS, MO 63105
ZEFFREN, JOEL L IM
2428 WOODSON RD
OVERLAND, MO 63114
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1031 BELLEVUE AVE., #200
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ZIA, RASHID P
915 N GRAND
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— *Notes* —

1982-1983 Policy Manual of the Missouri State Medical Association

This manual shall be a guide for MSMA members to the stand taken by the House of Delegates of the Missouri State Medical Association on issues involving Association policy.

The manual will be updated and revised according to House actions. The date in parentheses following each policy statement denotes the year it was adopted by the House.

Abortion

An abortion should be considered illegal if performed by anyone other than a licensed physician in a place other than a licensed hospital. (1970)

Acupuncture

The MSMA urges the Missouri State Board of Registration for the Healing Arts to utilize such legal and statutory powers as may be available to declare that the principles apparently involved in the practice of acupuncture and shiatsu, if found to be scientifically valid and medically beneficial would fall under the definition of the practice of medicine. (1973)

Alcoholism — Adjunctive Treatment

The MSMA supports the use of the adjunctive treatment resources of Alcoholics Anonymous, Al-Anon, Ala-Teen and the National Council of Alcoholism local affiliate by physicians in treating patients. (1979)

Alcoholism — Pharmacy Liaison

The MSMA supports a closer cooperation between physicians and pharmacists in a public education program regarding the problem of abuse of legally prescribed drugs and alcohol. The professional education of physicians and pharmacists should include courses in these areas. (1979)

Alcoholism — Public Education

A uniform policy regarding alcohol and drug abuse education in schools is supported. In-depth education should be provided to Driver Education classes regarding drug and alcohol abuse as related to traffic safety. (1979)

Amphetamines — Use

The MSMA asks its members to restrict their use of amphetamines and other stimulant drugs to the treatment of specific, well-recognized medical indications such as narcolepsy, hyperkinesia, mild depression and starter doses for obesity. (1971)

Armed Services

The MSMA encourages the Department of Defense to take steps to attract physicians to serve in the Armed Forces Reserve. Physicians should be utilized according to their capabilities and training and compensated appropriately for their time. (1979)

Board of Healing Arts

The State Board of Healing Arts should be provided with a wide range of discipline powers including requiring errant doctors to seek counseling or additional education. Also, every state should be informed when any doctor has his license suspended, revoked or is placed on probation. (1976)

The MSMA opposes any legislation which would dilute the licensing power of the State Board of Registration for the Healing Arts to license those physicians of good ethical and moral character. (1975)

Cancer — Reporting

MSMA supports efforts to require hospitals to report to the state all malignant neoplasms with the exclusion of non-melanomatous cutaneous malignancies. This statistical data is necessary to determine relationships between cancer control efforts in the state. (1982)

Certificate-of-Need

Any Certificate-of-Need law in Missouri should completely exempt private physicians and their offices from provisions of the legislation and contain a dollar limit of at least $500,000 before a Certificate is required in remodeling or constructing of health care facilities. (1976)

CHAMPUS

The MSMA recommends that CHAMPUS discontinue the use of nonphysician health care providers due to a lack of documentation of cost-effectiveness and the resulting lower standard of health care for patients. (1981)

Chemotherapeutic Costs

The MSMA should sponsor appropriate legislation that would make mandatory the offering of insurance coverage for reimbursement of chemotherapeutic agents, particularly on an outpatient basis. (1977)

Chiropractic Policy

The MSMA is unaware of any scientific evidence that proves that spinal manipulation and adjustment are appropriate treatment for such health conditions as hypertension, heart disease, stroke, cancer, diabetes and infections. Therefore, the MSMA will continue to warn the public of the health hazards of entrusting the treatment of such conditions to practitioners who maintain that all disease is caused by the misalignment of the spinal vertebrae and can be cured by manual manipulation and adjustment of the spine.

A physician may refer a patient for diagnostic or therapeutic services to another physician, licensed limited practitioner or any other licensed provider of health care services whenever the physician feels that these services will benefit the patient. As in the case with physician referrals, limited practitioner referrals should be based on their individual competence and ability to perform service to the patient.

The MSMA also supports the right of every physician to choose whom he or she will accept as patients and also exercise his or her choice by the terms of contractual agreements with other physicians, medical groups, hospitals or other institutions. (1981)

CME Accreditation

The MSMA supports the concept that continuing medical education accrediting should be conducted at the state level with the AMA as the only CME accrediting body. (1980)

Community Professional Directories

It is not unethical for a physician to authorize the listing of his name and practice in a directory for professional or lay use which is intended to list all physicians in the community on a uniform and non-discriminatory basis. The listing shall not include any self-aggrandizing statement or qualitative judgment regarding the physician's skills or competence. The *American Medical Directory* provides an example of the kind of information that may be properly listed in national as well as community directories for health service personnel. Likewise, specialities or specialty practices used in the *American Medical Directory* should set the pattern for specialty designations. (1975)

Confidentiality — Medical Records

The MSMA encourages the enactment of legislation which would fully protect the confidentiality of medical records and of professional or peer review activities which are based on review and evaluation of such records. (1978)

Confidentiality — Missouri Health Data Corporation

Missouri physicians strongly encourage the MHDC Board of Directors to retain control of their confidential information. (1982)

Cost Effectiveness

The MSMA encourages individual physicians to help moderate increases in medical care costs by avoiding over-utilization and by using appropriate restraints to keep fee increases more in line with the annual cost of living increases. The Association endorses the Voluntary Effort to restrain increases in hospital costs. (1978)

Death — Definition

A person shall be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person shall be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous brain functions. Death shall have occurred at the time when the relevant functions ceased. (1976)

Drugs — Abuse of

The MSMA supports educational programs for junior high school students that will emphasize the hazards of drug abuse. (1982)

Drugs — Generic Prescribing

The MSMA opposes governmental interference into the practice of medicine through mandated generic prescribing of drugs. (1976)

Drugs — Use of Combination of

The Federal Food and Drug Administration should carefully study the prescribing habits of physicians before discontinuing a combination of drugs packaged together. (1974)

Drunk Drivers

The MSMA agrees to cooperate with the Legislature or proper agencies to remedy the dangerous problem of drunk drivers. (1974)

Education — Loans

MSMA supports continued federal and state subsidized, low interest loan programs for medical students, with properly enforced repayment. (1982)

Education — Patient

The MSMA adopts the following guidelines for third party reimbursement for patient education:

1. The goal of patient education programs shall be to improve health and the delivery of health care services through cooperative efforts of informed patients and health professionals.
2. Patient education programs shall be provided under the guidance of an educational committee comprised of members of the health professions, and administration, and consumers.
3. Patient education committees will be responsible for the establishment, maintenance, and evaluation of all patient education programs.
4. Patient education services shall consist of planned efforts, with stated goals and objectives, based upon identifiable needs of patients and the resources of the health professionals.
5. Patient education services shall be provided under the direction of a practicing physician and a trained educator and must be appropriate to the immediate health needs of the patient.
6. Participation in such programs shall be by prescription of a practicing physician and shall be documented in the patient's chart. (1975)

Education — School Health

Factual, academically founded courses should be developed and implemented by the Missouri Department of Education to teach human physiology and pathophysiology at the elementary and secondary levels of the school system. (1974)

County medical societies are urged to work with local school districts to assist in providing comprehensive health education programs and the state colleges of Missouri are urged to prepare qualified health instructors trained to integrate health concepts into all the courses they teach. (1972)

Fireworks

The MSMA supports a ban on the sale of fireworks in Missouri. (1976)

Fluoridation

The MSMA, realizing the medical importance of natural occurring fluorine taken in proper concentration into the human body, recommends the adding of fluorine to all drinking water systems in Missouri in the concentration of one part per million. (1972)

Foreign Medical Graduates

MSMA Council and committees are encouraged to consult with Foreign Medical Graduate groups when subjects of interest come up. All physicians, Foreign Medical Graduates included, are encouraged to participate in their component societies, MSMA and AMA. (1982)

Handicapped

MSMA is involved in seeking positive ways to encourage training and rehabilitation for disabled persons. MSMA wants to work with existing organizations to remove physical and emotional barriers that prevent disabled people from working. (1982)

Health Systems Agencies

The MSMA supports a program of voluntary, locally based health planning designed to address particular local and regional needs and favors legislation repealing the National Health Planning Act. (1981)

Home Health Care

The concept of home health care and visiting nurses care as a proper and economical way to bring quality health care to Missouri citizens not requiring more expensive and acute care is favored by the Association. (1972)

Hospice

The MSMA supports legislation to encourage the establishment of physician-directed hospice care. (1978)

Hospital — Preadmission Certification

The MSMA will continue to oppose implementation of hospital preadmission certification. (1974)

Immunization

MSMA supports legislation which would establish strong immunization requirements for preschool children. (1982)

Insurance — Charge for Extra Claim Forms

Physicians should feel free to charge for the additional service of filing more than one insurance claim form, especially if a different claim form is required rather than a photocopy of the original claim form. (1973)

Insurance — Maternity Coverage

The MSMA supports inclusion in all insurance policies for those in childbearing years of a clause providing complete maternity coverage.

In order to provide continuity of coverage, the following eligibility period should be written into all insurance policies concerning benefits for obstetric care: "A pregnancy which begins while the insurance is in force should be covered until the termination of the puerperium and until the newborn infant is discharged from the hospital to home care." (1974)

Insurance — Psychiatric Illnesses

The MSMA recommends that the State Commissioner on Insurance requires that all health and accident insurance policies sold in Missouri provide coverage for psychiatric illnesses equivalent to benefits for other medical and physical illnesses. (1978)

Insurance — Terminology

MSMA encourages local insurance carriers to be careful about using literature containing the wording "usual, customary and reasonable" describing insurance benefits paid. This leads some patients to believe physicians' charges are "unreasonable." MSMA also encourages physicians to include in their patient information materials an explanation as to why the amount billed may sometimes be more than the insurance benefit paid. (1982)

Laboratory — Collecting Fee

The MSMA supports payment under Medicaid to the physician for his service in collecting a specimen used for tests performed in an outside laboratory. (1977)

Licensing — Felon

As a general rule, the MSMA opposes the granting of a license to practice medicine to any physician who has been convicted of a felony. (1973)

Licensing — FMGs

The MSMA endorses the policy of accepting the "Fifth Pathway" for physician licensure in Missouri. (1975)

Licensure — Federal

The MSMA opposes any moves to require Federal licensure of health manpower. (1976)

Long-Term Health Policies

MSMA supports AMA policy which asks all physicians to voluntarily do their part in helping the country to economically recover. (1982)

Malpractice — Countersuits

Any Missouri physician found not to be negligent in a malpractice suit shall have the assistance of the MSMA in determining if there exists a reasonable basis for the physician to commence an action for malicious prosecution arising out of such case. (1976)

Medicaid Program

The MSMA no longer endorses the Title XIX Medicaid Program because of the unreasonably low level of reimbursement for physicians' services. (1978)

Medical Examiner System

The establishment of the county medical examiner system as a replacement for the county coroner system is strongly recommended. (1971)

Motorcycle Head Gear

The MSMA urges all motorcyclists to wear protective head gear (helmets) to prevent death and disability. (1977)

MSMF Loans

The Missouri State Medical Foundation requires membership in their state medical association for those medical students eligible for membership and receiving financial assistance from the Foundation. (1980)

National Health Insurance

Any system of national health insurance must be

(Continued on page 584)

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Please see summary of product information on following page.

References: 1. Williams RL, Karacan I: Introduction, chap. 1, in *Sleep Disorders: Diagnosis and Treatment*, edited by Williams RL, Karacan I, Frazier SH. New York, John Wiley & Sons, 1978, p. 2. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 20, 1979. **4.** Kales A *et al*: *J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Kales A *et al*: *Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al*: *Behav Med 5*(10):25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **14.** Kales A, Kales JD: *Pharmacol Physicians 4*(9):1-6, Sep 1970. **15.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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(Continued from page 582)

designed with the consultation and aid of practicing physicians with the welfare of the patient as the guiding principle. A mechanism should be provided so the patient realizes the value of medical services to the point of real participation in the payment for those services. (1974)

The MSMA endorses the American Medical Association's bill as the national health insurance plan best suited to maintaining the high quality of American medicine. (1976)

Nursing Education

The MSMA supports all present forms of nursing education as being essential to meeting the health care needs of the state and local community. (1980)

Nurse Practitioners

The MSMA supports the doctrine that physicians retain control of medical care and will challenge any person who is practicing medicine without a license, in the courts of law if necessary. (1978)

Optometrists — Drugs

The Association opposes the expansion of the Missouri Optometric Act which would allow the use of drugs in the practice of optometry. (1977)

Osteopaths — Association With

Medical doctors may consult or associate with Doctors of Osteopathy and participate in postgraduate education specifically designed for their needs. (1965)

Osteopaths — Membership

Both local and state medical societies may accept for full membership osteopathic physicians who are licensed to practice medicine in Missouri. (1970)

Physician's Assistants

The MSMA opposes state licensure or certification of additional health care personnel because there is no reason to accept a second class (second level) of medicine. (1979)

Primary Medical Care

Primary medical care shall be defined as only that care given by a licensed graduate of a medical or osteopathic school. (1977)

PSRO

The MSMA will work to insure that patient care is of a high quality, appropriate duration and is rendered in appropriate setting at a reasonable cost. The MSMA supports the elimination of all government directed peer review programs, including PSRO. (1981)

Seat Belts

The MSMA favors passage of state laws requiring use of seat belts in motor vehicles. (1974)

(Continued on next page)

Retention of Medical Records

How long should medical records be kept? The obvious answer is "as long as the doctor needs them." But the question is more complex than that. For example, statutes may require that records of certain medical events be maintained for specified periods of time. Records of abortions must be kept for seven years. Further, records must be kept for at least as long as the period of limitations on medical malpractice.

The period of limitations on medical malpractice is defined in Section 516.105 as follows:

> All actions against physicians, hospitals, dentists, registered, or unlicensed practical nurses, optometrists, podiatrists, pharmacists, chiropractors, professional physical therapists, and any other entity providing health care services, and all employees of any of the foregoing acting in the course and scope of their employment, for damages for malpractice, negligence, error, or mistake related to health care, shall be brought within two years from the date of occurrence of the act of neglect complained of, except that a minor under the full age of ten years shall have until his 12th birthday to bring action, and except that in cases permitting any foreign object to remain within the body of a living person, the action shall be brought within two years from the date of discovery of such alleged negligence, or from the date on which the patient in the exercise of ordinary care should have discovered such alleged negligence, whichever date first occurs, but in no event shall any action for damages for malpractice, error, or mistake be commenced after the expiration of ten years from the date of the act of neglect complained of.

Generally, lawsuits must be brought within two years of the date of the allegedly negligent act. However, the time period may not begin to run immediately. For example, the statute provides that actions for negligently leaving a foreign object in the patient's body shall be filed within two years of the discovery of the foreign object, or the date on which the object should have been discovered.

Further, when the physician continues to treat the patient, the period does not begin to run until the date of the last treatment. Therefore, the physician must keep his records until at least two years after the last treatment. Also, remember that minors under age ten have until age 12 to bring suit.

Second Opinions in Surgery

The MSMA, while realizing the value of consultation, opposes the concept of mandatory second opinions and supports the position that when second or more opinions are mandated by any party that this party is responsible for any consultation fee and the choice of consultant is the responsibility of the patient and/or the attending physician. (1978)

Smoking

The MSMA supports legislation directed at designating non-smoking areas in public places and prohibits smoking at all MSMA House of Delegates meetings and scientific sessions held in conjunction with these meetings. (1981)

Third Party Reimbursement

The MSMA urges third party payers, including the Division of Family Services, to establish economic incentives to physicians to encourage more in office care. This would include payments for professional fees, laboratory and x-ray services, supplies and other ancillary services performed in a physician's office. (1982)

The MSMA supports equal reimbursement for equal professional services provided by a physician, regardless of his geographic location. (1982)

Unpaid Accounts — Interest

It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note for professional services not paid within a prescribed period of time nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection.

It is not improper, however, for a physician to add a service charge, equal to the actual cost of rebilling, on accounts not paid within a reasonable time. Patients must be notified in advance about the existence of this practice. (1975)

Utilization Review — Participation

The MSMA supports the right of individual physicians voluntarily to elect not to participate in governmental review programs which they believe conflict with the principles of good medical practice when they have no contractual or ethical obligation to such program. (1976)

Utilization Review — Reimbursement

In those hospitals which conduct utilization review of any inpatient care, compensation of physicians for such review is a legitimate expense. The cost of such review should be included in hospital rates and reimbursable costs regardless of the source of payment. (1976)

If you have questions on these or other policy matters, please contact the Missouri State Medical Association, Box 1028, Jefferson City, Mo. 65102. Tel. — (314) 636-5151.

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Medicare Reimbursement Questions Answered

Since the enactment of the Social Security Amendments of 1965, the AMA has continually sought, through legislative and other means, to insure equitable and realistic levels of reimbursement for physician services under the medicare program.

Problems related to inequities in medicare reimbursement have, in some instances, been compounded by physician misunderstanding or lack of knowledge as to just how reimbursement levels are established under this program. For that reason, the AMA House of Delegates recommended that the association make every effort to inform the profession as to the methods by which physician fee profiles and levels of reimbursement are established by medicare.

In response to that recommendation the AMA Council on Medical Service attempts to answer some of the questions most frequently asked by physicians on this subject. The questions and answers are based on information contained in the *Medicare Carrier's Manual,* issued by the U.S. Department of Health and Human Services, and on changes in medicare law enacted in 1981.*

On what basis does the medicare program pay for physicians' services?

Medicare pays 80 percent of the "reasonable charge" for covered physicians' services which are billed on a fee-for-service basis, after an annual $75 deductible, which is paid by the patient or beneficiary.

What is a "reasonable charge"?

"Reasonable charge," as defined in medicare law, is the *lowest* of:

(a) your "customary charge" for a service (the "customary charge" is the individual physician's median charge for the service, an amount which would cover his charge at least half the time he performed the service);

(b) your actual charge on a given claim, if lower;

(c) the "prevailing charge" for that service in your area (the "prevailing charge" is the 75th percentile of customary charges for this service made by physicians of like training and skill in the area, weighted by frequency; that is, the "prevailing charge" is that amount which would cover the "customary charge" for the service in that area at least three-fourths of the times it is performed); or

(d) the charge on which the medicare carrier bases payment under its own private policies.

How is my "customary charge" calculated?

All the actual charges you have filed with a medicare carrier during the previous calendar year (January 1 through December 31) are accumulated and used to develop a ceiling of customary charges for the fee screen year beginning the following July. Charge data are obtained not only from claims you have filed with medicare on assignment but also from bills sent to patients when you do not accept assignment, and from the carrier's nonmedicare sources of information concerning your billing. Normally, it takes a minimum of three charges to develop your "customary charge" profile for any given procedure.

The customary charge is the median of your range of fees for a given procedure. For example, let us assume you have filed five claims for "office visits" in the previous calendar year. Your arrayed charges for the five visits were:

$ 8.00
$ 8.00
$ 8.00 - - - - median
$10.00
$10.00

The median charge for the service — and your "customary charge" — is $8.00, the point at which one-half of the charges are above and one-half below.

How is a "prevailing charge" calculated?

As already noted, the "prevailing charge" is the amount which would cover the "customary charge" for the service in that area at least three-fourths of the times it is performed. The example below illustrates how this charge is calculated by medicare.

75th Percentile — Prevailing Fee

In this example, the 75th percentile includes charges up to and including $15. This includes the charges for 83.94% of the instances in which the procedure was reported. Although the 75th percentile is selected as the prevailing limit, the fact that the same charges are made many times may mean that a larger percentile is also covered in full, as in this example it covers 83.94% of the charges.

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* *The Council on Medical Service of the American Medical Association published this information in its copyrighted pamphlet, "Physician Fees Under Medicare – How They Are Established." It is reprinted in full with permission. One to 10 copies of the brochure are available free of charge from the AMA.*

Customary Charge	*Number of Services*	*Percent of All Charges*	*Cumulative Percent*
$10	1402	28.04%	28.04%
$12	1115	22.30%	50.34%
$15	1680	33.60%	83.94%
$20	803	16.06%	100.00%
	Total 5000		

This procedure is followed to develop a prevailing fee for each procedure within a locality, and for different specialties for those procedures in which a given specialty's fee pattern differs from those of other specialties in the area. As a result, each medicare carrier has many thousands of prevailing fees.

How often are "customary charges" and "prevailing charges" updated?

Both the "customary charge" and the "prevailing charge" are calculated annually; payment screens are updated July 1 (the beginning of the "fee screen year") based on data on your and other physicians' charges made during the previous *calendar* year. Therefore, medicare payment for most physicians' services is based on what the physician was charging a year to two years previously, and are that far behind charges to the nonmedicare public from the start. For this reason, the "reasonable charge" under medicare will almost always be less than the actual charges being made by a physician at any given time.

What is the so called "economic index," and how does it affect my fees under medicare?

New "Economic Index" regulations, called for by Public Law 92-603, were published by the Department of Health and Human Services in final form on June 16, 1975. These regulations established a *maximum percent of increase* in "prevailing charges" which could be allowed for any year over the prevailing charges in effect during fiscal year 1973. The allowed yearly percent of increase is limited not only by actual increases in physicians' charges but by an economic index established by the Department of Health and Human Services, which is intended to reflect increases in the cost of doing business. The index operates on the assumption that 40 percent of a physician's income goes to expenses and 60 percent to net income. It allows an expense related increase in the prevailing charge based on data on salary increases in nonmedical service industries, on increases in housing and transportation costs, on wholesale price increases for drugs and pharmaceuticals, (for miscellaneous costs) on consumer price index increases, and on premiums for professional liability insurance. An increase in the net income component is allowed in proportion to increases in the earnings of production and nonsupervisory workers, adjusted to eliminate productivity increases.

The economic index is calculated annually to determine the maximum allowable increase in prevailing charges. For the period of July 1, 1981 to June 30, 1982, the index has been set by the Department of Health and Human Services at 1.790; i.e., prevailing charges in 1981 can be no more than 79 percent above the level of prevailing charges in 1973 based on charge data from calendar year 1971. To implement this regulation medicare Part B carriers will now, in effect, prepare three types of charge screens for each locality; a "customary charge" screen for the individual physician, based on his actual charges during the preceding calendar year; a "prevailing charge" screen; and a second "prevailing charge" screen developed by applying the current economic index to the FY 1973 "prevailing charge" screen. *Each physician's "reasonable charge" will be the lowest of the three figures.*

I have just gone into practice and obviously I do not have any charges on record during the previous base calendar year. On what basis will medicare reimburse me?

Because medicare has no data on record for you, the formula used for reimbursement follows a Health Care Financing Administration directive concerning such circumstances. Physicians newly in practice are reimbursed on the 50th percentile of other physicians' charges. The 50th percentile is defined as that charge which includes the customary charges of the physicians performing at least 50 percent of the services in the same specialty and location. In many instances, this charge is equal to the prevailing fee in the community; in other instances, it may be significantly below the "prevailing charge." In addition, medicare requires carriers to use at least three months' charge data in a given calendar year to establish a new physician's individual "customary charge" for the following fee screen year. Accordingly, a physician who begins practice after October 1, 1980 will be paid at a 50th percentile maximum until July, 1982.

Can I have my profile adjusted to reflect my current charges which indicate changes I have made in my fees?

No. By law, each update, effective each July 1, is based on charges of the previous calendar year. Current changes in your fees will not be reflected in your profile until July 1 of the next year.

When the next updated profile becomes effective on July 1, will it always reflect my new fees where I have made increases?

Not necessarily. Increases in a physician's customary charge profile depend on whether the median charge for the previous calendar year has changed. As an example, if a fee was increased in December of the previous calendar year, it is doubtful it will be recognized on July 1.

Is medicare prevailing fee data available, and, if so, how do I obtain it?

You can obtain prevailing fee data, which is arranged according to procedure, locality, and specialty, upon written request to your medicare carrier, and usually at nominal cost. Individual physicians' medicare fee profiles are also available on request by the physician or by members of the public.

How do I obtain a copy of my fee profile from a carrier?

Address your written request to the medicare carrier which serves your area.

I have requested my profile, but not all my services are listed. Can you explain why my profile appears to be incomplete?

For a service to appear on your profile, you would usually have to have filed at least three or more charges for the same procedure in the same year. A single claim for a service does not provide enough data to determine whether that charge is your customary one. Profiles are not carried over from one year to another, but are based on the previous calendar year's accumulated data.

Does the local medicare carrier employ individuals to assist me or my staff?

Most carriers do have individuals who will come to your office to assist you, and who will also conduct training and informational seminars for your office staff. The address of the carrier for your area can be obtained from your state medical society or the local office of the Health Care Financing Administration.

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Marketing Concepts for Medical Practices

By
Geoffrey T. Anders
Leif C. Beck
Dorothy R. Sweeney

PRIVATELY PRACTICING PHYSICIANS are slowly but certainly turning to marketing and "public relations" (PR) as means of building and/or maintaining their patient bases. The concept of having to do more than practice good medicine to protect their patient flow is resisted by many physicians, yet more and more practices are recognizing the need for extra efforts to succeed or simply to maintain patient volumes and physician incomes. That extra effort is "marketing" in one form or another.

Traditionally, doctors have strongly resisted such a concept. Physicians, as well as other professionals, often fail to distinguish marketing from selling or advertising. While the concepts are certainly interrelated, marketing encompasses a far greater territory — market research, pricing, service mix, distribution and so on.

In fact, both new and established practices have always marketed their services in one way or another. A new doctor in the community is certain to introduce himself or herself to possible referral sources; OB/GYN practices have long offered prenatal education sessions to their patients; and almost every physician incurs some "professional entertainment" expense each year. These activities have usually been haphazard, lacking a focus aimed at improving practice visibility on a *planned* basis.

Today, with the so-called doctor "oversupply," rapidly expanding hospital outpatient programs and aggressive selling by HMOs and large clinics (that often employ experienced marketing personnel), many solos and smaller group practices are feeling pressure on their incomes. Other forward-looking practices recognize that they must begin to act rather than delay and later react to a deteriorating situation. These practices are beginning to organize and expand their patient relations efforts to resist encroachments — to consciously use marketing disciplines.

When well planned and carried out, marketing approaches have had dramatic success. One group of three primary care doctors we know doubled their number of monthly patient visits in slightly less than a year and continue to grow. In other situations, a good patient relations program has kept practices intact despite an influx of additional doctors of the same specialty. So it has become clear that whether a practice is looking for more patients or simply seeking to "protect its turf," marketing helps deal with this vexing set of developing problems.

BASIC PATIENT RELATIONS

Before moving to a more in-depth look at some aspects of marketing, any practice would be well advised to consider some all-pervading PR basics. It does a practice no good to develop routines to attract new patients or even to attempt strengthening relationships with present patients if it cannot hold those patients' allegiances. A practice housed in a shoddy office, perhaps in which no attention has been paid to patient comfort, is simply fighting itself in terms of patient retention.

The best source of referrals must ultimately be the patients treated by the physician or group. Busy phone lines, weeks of delay for appointment times and long waits at the reception area, while sometimes unavoidable, must be kept to a minimum to keep patients at all happy. Similarly, smoothly functioning office routines in regard to insurance matters, billing and delinquent account collections, convenient office hours and helpful parking arrangements are all basic.

Perhaps of greatest importance is the office staff. Friendly, helpful assistants will go a long way in overcoming other PR "sins"; no matter how good the service or how bright the office, an antagonistic staff will turn patients away.

Many physicians unfortunately are so consumed with "practicing medicine" that they give no serious attention even to these fundamental concerns of patient relations. The pressures now building on private practices will, we fear, eventually cause these doctors to regret the narrowness of their concern. While other more perceptive doctors effectively retain or increase their share of the patients, some will find their prac-

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tices and incomes lag from their failure to manage these "office matters" in the first place.

Assuming that the basics have received their attention, practicing physicians should focus on other areas of marketing, particularly in the areas of service analysis and market study.

Marketing — An Overview

Marketing in broad terms is an attempt to anticipate and/or shape consumer behavior. It involves determining what patients want or need (either intuitively or by market research) and learning what motivates patient choices. It then concerns developing strategies and routines either for adapting the practice to meet those patient desires or for motivating patients to alter their health-care provider choices. Marketing is much easier to talk about than it is to perform.

Medical practice consumers (patients) are as diverse as the people in the community served. Few marketing approaches will appeal to a practice's entire range of patients. Thus, a doctor planning strategies should concentrate either on reaching the largest portion of the potential patients or, perhaps better, on focusing specific effort to reach targeted segments of the population. For example, a practice with an abnormally high rate of cancellations and broken appointments might adopt routines to correct that problem, or a practice located off the main roads might specifically work to increase its office's physical visibility.

In developing marketing techniques, the primary question is whether or not the patient will recognize the benefit of using the practices services. Bound up in the broad question is another — does the strategy favorably highlight the "product," the place or the price? If those questions cannot be answered affirmatively, the marketing routine under consideration probably is not worthwhile.

Market Analysis

To begin planning a marketing strategy, a practice must know — in market terms — where it is and where it can realistically be in order to decide how to proceed. That calls for a hard look at various facets of the practice and its present patient base and at the "competition." Obtaining and evaluating the information may be the most difficult task, but various patient relations ideas should readily present themselves upon a conscientious market analysis effort.

In group practices, one doctor should be assigned primary responsibility for the effort, using staff help for the "nitty-gritty" information gathering. In smaller practices, more of the details will naturally have to be borne by the physicians themselves. Computerized practices have a definite advantage in the information gathering stages since standard software packages should permit tallying patients by diagnosis, referral source and the like. Unfortunately, however, many practices which have access to that data have not established routines allowing them to make effective use of the information.

Let us suggest some information items one might initially collect in the marketing analysis stage:

> What is the practice like in terms of specialty, clinical procedures performed, major additional procedures that might be performed, office environment (both the physical facility and, more importantly, the staff-patient rapport), patient and referring doctor patterns, present public relations efforts, etc.
>
> Who is the competition? Do not list only the other private practices since hospital programs, HMOs and large clinics must also be considered. How do each of those providers compare against your own practice as to quality and in terms of the characteristics listed for your own practice? Defining strengths and weaknesses in comparison with others offering the same care can be most enlightening.
>
> What is the total available patient population in terms of numbers, community, sex, age, third party insurance, number of families, education and the like? Are there any significant growth areas in the community? Is a particular industry or are a few employers key to the community's economics? Much of this information is available from local chambers of commerce and standard referral sources such as "U. S. Abstracts."
>
> From where do the practice's patients presently come? This question is critical. Unless a practice knows the present sources of its patients, any efforts to attract new patients may simply result in canvassing already covered territory. Breaking down the present patient population by zip code, employer, referral source (patients, doctors, etc.), diagnosis, insurance coverage and other factors permits a doctor or group to compare his or her patient base with the community's demographics. The comparison should be intended to reveal the

(Continued on page 591)

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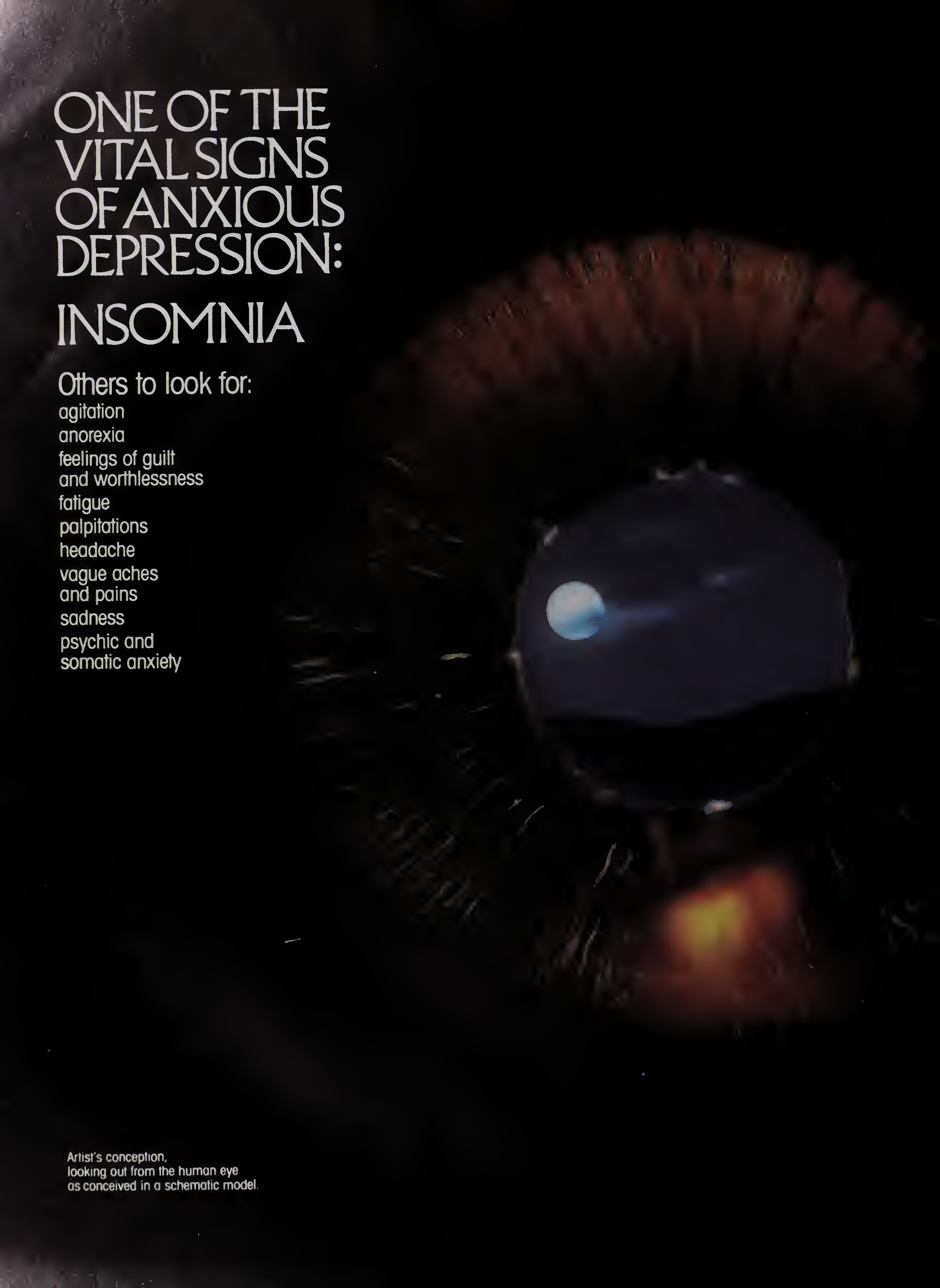

ONE OF THE VITAL SIGNS OF ANXIOUS DEPRESSION:

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agitation
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vague aches and pains
sadness
psychic and somatic anxiety

Artist's conception,
looking out from the human eye
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Please see summary of complete product information on following page.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved Contraindicated during acute recovery phase following myocardial infarction

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g , operating machinery, driving).

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment Amitriptyline component may block action of guanethidine or similar antihypertensives Concomitant use with other psychotropic drugs has not been evaluated sedative effects may be additive Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects

Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs

Cardiovascular Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke

Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido

Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract

Allergic Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia

Gastrointestinal Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue

Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels

Other Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling

Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment

Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h s.* dose may suffice for some patients Lower dosages are recommended for the elderly Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required.
Limbitrol 5-12 5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses

How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500, Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10, Prescription Paks of 50

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(Continued from page 590)

best approaches to holding the present patients as well as the fertile grounds for obtaining new patients.

As a mild example, we know of a well-established internal medicine subspecialty group that had noted a leveling off of new patients. By tracking the source of new patients on its patient registration sheets, the doctors learned that referrals from present patients were far below normal. With that information before them, the doctors recognized that approaches had to be directed to their existing patients in order to restimulate practice growth.

Comparing from where one's patients come against what patients are available within the service area should help the doctor(s) decide where the practice growth efforts should be aimed. Attempting instead to reach the community at large may be too much a hit or miss approach in which the available time and money is not concentrated on the most likely sources of patients.

Service Analysis

There is another facet of marketing which is often overlooked — structuring the medical services to the desires and needs of the patients. A rheumatology or other internal medicine practice that can provide laboratory facilities for its patients is usually well advised to do so even if the laboratory runs at a financial breakeven or slight loss. The greater convenience to patients will typically be worth the extra hassle and investment to the doctor(s).

A group practice might consider adding a new physician or other providers to round out the services it provides. Pediatric groups might recruit a pediatric allergist; orthopedic groups can engage a physical therapist; and a general internist might add physicians with subspecialty training. While bigger is not necessarily better, structuring a group to provide "full service" is an attractive patient offering. In some recent situations, groups have expanded both in number of same-specialty physicians and by adding related specialities; their purposes were not only to provide more and better care within the group but also to discourage other doctors from settling in their community.

As a third slant on service analysis, doctors should evaluate their present services in terms of profitability. It is occasionally preferable to refer out some patient problems and to concentrate on more profitable, perhaps less time-consuming, services. And to the extent the selectivity leads to a reputation, for example, that a certain orthopedist "specializes" in total knees or total hips, so much the better.

Patient Relation Strategies

Once the targeted patient group and a marketing strategy have been identified, physicians have a range of possible techniques from which to choose. The choices must be made carefully and with the previously determined goal firmly in mind. Obviously, the selected technique should project the practice's image in the community. But in addition to projecting one's general reputation, a well-designed strategy must distinguish the practice from others providing similar services. Some methods will be more effective in strengthening relations with present patients while others will serve primarily as practice builders.

In attracting new patients, many strategies will depend partly or wholly on patient word-of-mouth. A choice that causes your patients to talk about you can thus be extremely valuable if you have otherwise taken care of the basics previously discussed. Producing a helpful drug information booklet will not help much if your patients will also comment on their hour-long waiting room experiences.

The best public relations approaches put the practice's name before its patients while simultaneously providing a valued service. Patient information booklets and drug effects booklets are good examples. Both of them give needed information and express the doctor's concern for his patients while placing the practice's name in front of its patients — perhaps potential patients as well.

The patient newsletter concept is perhaps the best approach along these lines. If well constructed with interesting, readable items of medical information, patient newsletters satisfy a need for preventive medical information while placing the practice's name in front of patients and prospective patients. Patients receive something beyond the usual fee-for-service doctor procedure — a "valued added" marketing concept.

Patient newsletters are flexible in how they might be used. They can be mailed quarterly or semi-annually to all active and inactive patients; they might, instead, be enclosed with monthly billing statements; or they could simply be available at the front desk and distributed by the receptionist. Some practices send a copy along with a note to each new patient to confirm the scheduled visit and say, "We thought you might find our patient newsletter interesting." This latter approach can help avoid new-patient visit cancellations that plague some practices.

Along other lines, a group of pediatricians we know staged "An Evening with your Pediatricians" for parents. The evening of questions and answers was a dramatic success in terms of patient relations and the goodwill established. It also caused patients to talk about the practice.

While on a lower key and less visible to the community, other devices might generate enough patient goodwill to help a doctor or group retain an already established patient population. Quite a few of these "marketing" ideas are really "old hat" that are not typically considered patient getters but, nevertheless, they deserve consideration.

"Loss leaders," for example, are quite common in some practice situations. A doctor might have certain patients return to the office for little or no fee to follow specific conditions. Any lost revenues may later be made up whenever surgical or other more extensive procedures become necessary. A lenient credit and collection policy, while unsound from a financial management standpoint, is a marketing technique. Participation in third party insurance programs, such as Blue Shield and Medicare, is another means of competing for patients. While these pricing tactics may succeed from a marketing standpoint, other objections have usually caused us to prefer marketing based on quality and service, but now we begin to see good practices taking both tacks.

Other low-profile marketing approaches emphasize service. Some practices, for example, will prepare and submit their patients' third party insurance claims forms even if they (the practices) do not participate in those programs, the paperwork simply being handled on the basis of better patient service. Some subspecialty physicians follow up on referred patients with personal phone calls to the referring doctors in addition to their usual letter reports. Similarly, calling patients with laboratory test results is not only more efficient but a helpful convenience for the patients involved.

Conclusion

Adopting certain described marketing techniques may indeed cost money. We would not be surprised to see good practices commit 5% of their gross income to "PR and marketing" in the future as the competition among over-supplied doctors continues to increase. The choice should not, of course, always be simply to spend more money because careful cost/benefit analysis is an essential part of marketing. Each physician and group will and must seek to produce the most patient goodwill for the extra dollars spent on this new overhead category.

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Missouri Voluntary Health Agencies and Organizations

In some instances, patients of MSMA members are eligible to receive assistance from various Voluntary Health Organizations in the state.

Assistance may be in the form of free or subsidized special equipment, rehabilitation training, counseling, specialized care and information and many other areas.

In an effort to assist MSMA members in attaining assistance for their patients, the following annually updated list of Voluntary Health Organizations has been compiled. In some cases, a statewide organization is listed. In instances in which an organization is limited to a certain portion of the state, several organizations may be listed under one heading.

ARTHRITIS

Arthritis Foundation, Eastern Missouri Chapter
317 N. 11th, Suite 1117, St. Louis 63101
(314) 421-3550

Arthritis Foundation, Greater Kansas City-Western Missouri Chapter
8900 State Line, Suite 404, Leawood, Kan. 66206
(913) 649-8820

1. Literature for arthritis patients.
2. Public and professional education programs.
3. Newsletter.
4. Patient Clubs.

Arthritis Institute
2727 Main, Kansas City 64108
(816) 221-5383

1. Literature for arthritis patients
2. Public and professional education programs.
3. Newsletter.
4. Support groups.
5. Diagnosis and treatment of rheumatic diseases.

BIRTH DEFECTS

National Foundation March of Dimes
113 Hwy. 63 South, Columbia 65201
(314) 449-0573

1. Perinatal seminars for physicians and nurses held three times per month across the state.
2. Perinatal reprint series, articles related to the improvement of the outcome of pregnancy.
3. Limited patient aid support on chapter level.
4. Educational materials and audio-visuals for distribution through hospitals, clinics and offices to community and professionals.
5. Computer information service for providing physicians with diagnostic information.

BLOOD TRANSFUSION AND TISSUE BANK

Missouri/Illinois Regional Blood Services
4050 Lindell, St. Louis, Mo. 63108

1. Provides blood, blood components, blood derivatives including serum albumin, antihemophilic factor, immune serum globulin to the eastern half of Missouri.
2. Provides medical consultative services, therapeutic apheresis and transfusion related research in broad areas.
3. Recruits tissues and organs for transplantation and provides bone and corneas for clinical use.

CANCER

American Cancer Society, Missouri Division, Inc.
P.O. Box 1066, 3322 James Houchin Dr., Jefferson City 65102
(314) 893-4800

1. Trained volunteer visitation of mastectomies, ostomy patients and laryngectomies (with attending surgeon's permission).
2. Free loan of hospital beds, wheelchairs, commodes for home use.
3. Non-sterile cancer dressings.
4. Limited transportation services to and from treatment centers.
5. Limited assistance in the purchase of ostomy supplies.
6. Limited payment for pain medication (narcotics) for cancer patients.
7. Educational materials and audiovisuals on cancer prevention, diagnosis and treatment for public and health professionals.
8. Seminars for health professionals to update their knowledge and role in cancer prevention, diagnosis and treatment.
9. Patient education and support groups.

CEREBRAL PALSY

United Cerebral Palsy Association of Missouri, Inc.
P.O. Box 611, Columbia 65201
(314) 449-2934

Extends services to disabled persons through 12 affiliates:

1. Developmental training.
2. Diagnosis and evaluation at 10 cerebral palsy centers.
3. Family and interpersonal counseling.
4. Preschool education.
5. Communication skills.
6. Adult day care.
7. Recreation and social group skill.
8. Summer camping program.

CRIPPLED CHILDREN

Easter Seal Society for Crippled Children and Adults of Missouri
8124 Delmar Blvd., St. Louis 63130
(314) 726-0465

1. Coordinates provision of services to physically handicapped through Regional Offices.
2. Information and Counseling on employment of resources.
3. Variety of services including equipment and appliances, preschool programs, camping and recreation, in some areas.
4. Financial assistance for purchase of equipment and therapy on casework basis.

CYSTIC FIBROSIS

Cystic Fibrosis Foundation, Gateway Chapter
7730 Carondelet, St. Louis 63105

Cystic Fibrosis Foundation, Heart of America Chapter
7920 Ward Parkway, Room 206, Kansas City 64114
(816) 363-5636

1. Sweat testing and evaluation of Cystic Fibrosis Centers located in St. Louis, Kansas City and Columbia.
2. Assistance for drugs, laboratory work, x-rays, inhalation equipment and some hospitalization.

DIABETES

American Diabetes Association, Heart of America Affiliate
616 East 63rd, Kansas City 64110
(816) 361-3361

American Diabetes Association, Missouri Regional Affiliate
Box 11, Columbia 65201
(314) 443-8611
American Diabetes Association, Greater St. Louis Affiliate
1780 S. Brentwood Blvd., St. Louis 63144
(314) 968-3196

1. Patient education classes and support groups.
2. Professional and allied health education.
3. Summer camp for diabetic children.
4. Speakers bureau.
5. Bi-monthly magazine.
6. Literature, cookbooks available.
7. Professional referrals.
8. Fund diabetes research.

EPILEPSY

Epilepsy Federation of Greater St. Louis
4144 Lindell, Suite 200, St. Louis 63108
(314) 531-3900

Greater Kansas City Epilepsy League
4049 Pennsylvania, Suite 208, Kansas City 64111
(816) 531-1247

1. Discount drug program makes anti-convulsants available at cost.
2. Consultation and training programs available on individualized basis which include medical, pharmacological and psycho-social information.
3. Counseling program including individual, family, vocational and referral to other resources.
4. Prepared written pamphlets and other materials for patients, children and family members.
5. Film library.
6. Professional educationand job placement.

GROWTH DISORDERS

Human Growth Foundation, St. Louis Chapter
Box 9959, Kirkwood 63122
(314) 429-6893

1. Counseling for families about growth disturbances.
2. Referral source for information regarding financial assistance and growth problems.
3. Assists National Pituitary Agency in collection of human pituitary glands.

HEART

American Heart Association, Missouri Affiliate, Inc.
P.O. Box Q, 105 E. Ash, Suite 2, Columbia 65205
(314) 442-3193

1. Sponsor for medical research.
2. Sponsor educational programs on cardiovascular disease for all professionals.
3. Sponsor educational programs for public.
4. Assist in development of community service programs.
5. Referral for financial assistance or special services.

HEMOPHILIA

Bi-State Hemophilia Association
P.O. Box 22246, St. Louis 63116
(314) 771-6080

1. Free summer camp for hemophiliac children.
2. New implementation of drop shipment of Factor 8 and Factor 9 for those on the state home care program.
3. Sponsor hemophilia clinic at Cardinal Glennon Hospital.

KIDNEY

National Kidney Foundation of Kansas and Western Missouri
4006 Central, Kansas City 64111
(816) 531-3760

Kidney Foundation of Eastern Missouri and Metro East
8135 Forsyth Blvd., St. Louis 63105
(314) 863-5858

1. Public and professional education.
2. Support research grants.
3. Supply literature for kidney patients.
4. Patient services.
5. Drug bank. (Discounts for patient medications)

6. Source of referral for patients and families.
7. Endorse the "Gift of Life" Organ Donor Program.

Lung

American Lung Association of Eastern Missouri
411 North 7th, St. Louis 63101
(314) 241-1554

American Lung Association of Western Missouri
2007 Broadway, Kansas City 64108
(816) 842-5242

1. Health education films and materials aimed at prevention of lung disease.
2. Publications on treatment of lung diseases; seminars for physicians, nurses and allied health professionals on lung diseases.
3. Public quit smoking clinics.
4. Asthma education programs for children.
5. School health projects.
6. Support medical training and research.

Multiple Sclerosis

Multiple Sclerosis Society, Greater Kansas City Area Chapter
6501 Johnson Dr., Shawnee Mission, Kan. 66202
(913) 432-3926

Mid-Missouri Chapter
National Multiple Sclerosis Society
1201 Paquin G-2, Columbia 65201
(314) 875-6767

1. Weekly MS clinic at Kansas University Medical Center.
2. Patient equipment pool (purchase and loan).
3. Counseling.
4. Home care course for family education.
5. Support groups for patients and families.
6. Referral to community resources.

Muscular Dystrophy

Muscular Dystrophy Association, Inc., Greater Ozarks Chapter
1087 E. Commercial, Springfield 65803
(417) 866-5117

Muscular Dystrophy Association, Inc., Missouri Valley Chapter
3435 Broadway, Suite L-9, Kansas City 64111
(816) 931-7750

Muscular Dystrophy Association
Central Missouri Chapter
914 Tandy, Suite 2, Columbia 65201
(314) 443-6013

Muscular Dystrophy Association, Inc.
309 E. 7th St., Joplin 64801
(417) 781-7571

Muscular Dystrophy Association, Inc., Mississippi Valley Chapter
1023 S. Big Bend Blvd., St. Louis 63117
(314) 644-2828

1. Free diagnostic testing for 40 neuromuscular disorders.
2. Payment for orthopedic appliances.
3. Payment for limited amount of physical and occupational therapy.
4. Payment for influenza inoculations.
5. Transportation assistance.
6. Free services supplied at outpatient clinics.
7. Genetic counseling.
8. Professional education.

Myasthenia Gravis

Myasthenia Gravis Foundation, Inc., Greater Kansas City Chapter
4949 Rockhill Rd., Kansas City 64110
(816) 276-8310

1. Outpatient clinic on referral from patient's physician for confirmation of diagnosis, consultation or patient maintenance.
2. Myasthenia gravis drug bank.
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5. Professional educational seminar: Film and speaker provided.

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St. Louis 63108
(314) 658-2000

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3521 Broadway
Kansas City 64111
(816) 756-2365

1. Offers a number of courses to lay people, including "Preparation for Parenthood," "Multiple Sclerosis Home Care Course," "First Aid," "Cardiopulmonary Resuscitation" and "Health in the Home."
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3. Provides counseling and assistance to military families and veterans.

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(314) 634-2220 Toll Free 1-800-392-0218

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2. Referral services.
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4. Day care centers, recreational programs and parent counseling.

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5600 Oakland Ave., Suite G-350A, St. Louis 63110
(314) 644-4100

1. Provides and coordinates free support services, including information and counseling, to families experiencing the death of an infant due to SIDS.
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3. Provides education and training to health professionals and first responders to the death of an infant (police, firemen, ambulance paramedics, etc.).
4. Public information and community education.
5. Referrals to community resources.
6. Parent/peer counseling.
7. Supervises development of statewide support services for SIDS families.

Group Insurance Plans Available to MSMA Members

For Details of Each Plan Contact the Administrator

TYPE OF COVERAGE	UNDERWRITER	ADMINISTRATOR
Professional Liability Insurance. Claim coverage available from $100,000/$300,000 to $500,000/$1 million. Owned by MSMA.	Missouri Medical Insurance Company 100 North Broadway St. Louis, MO 63102 Telephone: (314) 241-4774	
Personal Disability Income. Benefits available up to $3,000 per month. Lifetime accident/to age 65 sickness coverage. Coverage for private flying available.	Commercial Insurance Company of Newark, NJ	Fred S. James & Co. of Missouri, Inc. Western Missouri 2420 Pershing Road Kansas City, MO 64108 Tel.: (816) 842-6670 Eastern Missouri 1015 Locust — Suite 828 St. Louis, MO 63101 Tel.: (314) 421-1838
Overhead Expense Insurance. Benefits up to $5,000 per month. Payment begins after 30 days disability and continues up to 2 years.	Commercial Insurance Company of Newark, NJ	Fred S. James & Co. of Missouri, Inc. (see above)
Accidental Death and Dismemberment. Up to $150,000 coverage. May include spouse, children and employees.	Commercial Insurance Company of Newark, NJ	Fred S. James & Co. of Missouri, Inc. (see above)
Hospital Indemnity Plan. $20 to $100 per day while hospitalized in addition to any other insurance. Family coverage available.	Commercial Insurance Company of Newark, NJ	Fred S. James & Co. of Missouri, Inc. (see above)
Term Life Plan. Members and employees under age 70 may enroll for benefits up to $100,000. Spouses eligible for up to $50,000. Dependent children may be insured for $2,500.	Mutual Life Insurance Company of New York	Forrest T. Jones & Co., Inc. 3130 Broadway P.O. Box 131 Kansas City, MO 64141 Tel.: 1-800-892-7272
Major Medical Plan. Pays up to a lifetime of $250,000. Deductibles from $200-$1,000. Coverage available to members, employees and dependents.	Mutual Life Insurance Company of New York	Forrest T. Jones & Co., Inc. 3130 Broadway P.O. Box 131 Kansas City, MO 64141 Tel.: 1-800-892-7272

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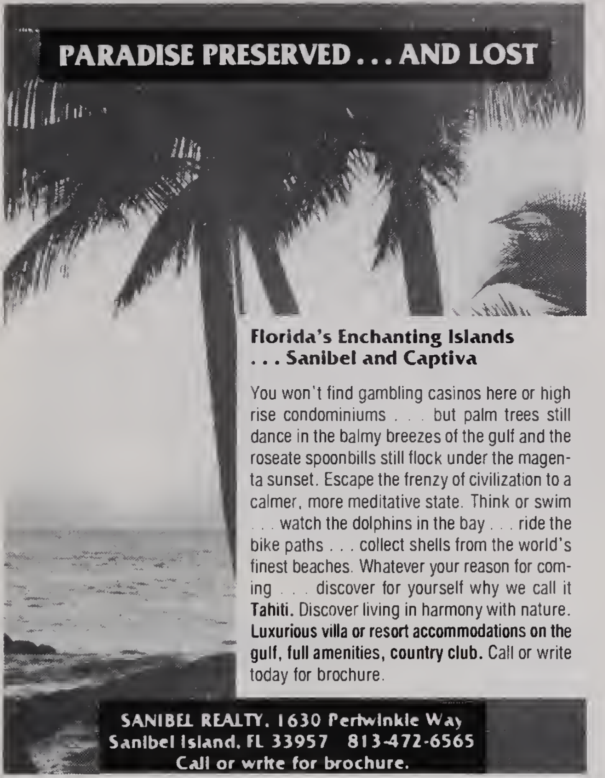

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effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults...
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in shigellosis...
faster relief of diarrhea than with ampicillin[2]

BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)
Before prescribing, please consult complete product information, a summary of which follows:
Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.
For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is *not* indicated for prophylactic or prolonged administration in otitis media at any age.
For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae or Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.
For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.
Also for the treatment of documented *Pneumocystis carinii* pneumonitis.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age.
Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended, therapy should be discontinued if a significantly reduced count of any formed blood element is noted.
Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.
Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.
Pregnancy. Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.
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Dosage: Not recommended for infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:
Adults. Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.
Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.
For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:
Usual adult dosage. 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.
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Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

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DOUBLE STRENGTH TABLETS

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*due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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Missouri Medicine

Vol. 79, No. 9 (ISSN 0026-6620) September, 1982

Special Review Article

Neonatal Screening for Metabolic Diseases In Missouri

Special Article

Ellis Fischel State Cancer Center

A New Name —
A New Beginning

Hypothermia In Urban Areas

The Hidden Killer

Editor's Corner

'Another Month,
Another Malady'

Interdisciplinary Care for Craniofacial Deformities

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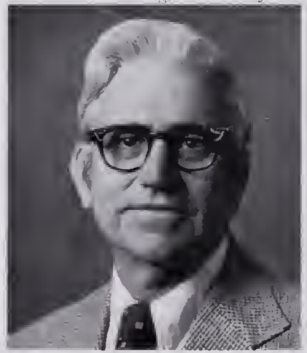
Director – Jefferson City



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NEWS NEWS NEWS NEWS Round Up

September, 1982

Governor appoints two Registration Board members

Two Missouri State Medical Association members have been named to the State Board of Registration for the Healing Arts.

Bray O. Hawk, M.D., and Phillip W. Pitney, M.D., were nominated to the board by Gov. Christopher S. Bond and subsequently received state Senate approval.

Dr. Pitney, Louisiana, replaces Dr. Mario Garza-Gonzalez, who has resigned. His term will expire Sept. 3, 1983.

Dr. Pitney graduated from the University of Missouri Medical School and completed his internship at St. Johns Mercy Medical Center in St. Louis.

Dr. Hawk, St. Louis, replaces Dr. J. H. Walterschied, whose term has expired. Dr. Hawk's term will expire Sept. 3, 1985.

A 1943 graduate of St. Louis University School of Medicine, Dr. Hawk interned at Akron City Hospital in Akron, Ohio, and served his residency in surgery at St. Louis University Hospitals. He has been a member of the staff of Incarnate Word Hospital since 1950.

Dr. Phillip W. Pitney

Dr. Bray O. Hawk

MSMA fights provisions in Congressional tax law

Last month Congress approved a three-year $14.2 billion plan to reduce Medicare-Medicaid spending. These cuts were included in the controversial "Tax Equity and Fiscal Responsibility Act of 1982," which significantly changes tax laws.

During Congressional deliberations, the MSMA and the AMA fought for deletion of provisions which would adversely effect the medical profession. MSMA President John I. Matthews sent letters to Missouri's U.S. Senators and U.S. Representatives outlining detrimental provisions.

Some of the provisions that were not included in the final legislation, now being sent to the President, include: 1) a limitation on the annual increase in physician fees through limits on the Economic Index; 2) indexing the Part B deductible to the Consumer Price Index; 3) elimination of the special matching rate for states to purchase Part B Medicare benefits for their eligible Medicaid beneficiaries; and others.

Some of the provisions that remain in the final legislation are listed.

Reimbursement of Hospital-Based Physicians — This Medicare provision calls for a differentiation between professional medical services furnished in a hospital that are directly furnished to a patient and contribute to the patient's diagnosis or treatment, and those services that are a benefit to the general patient population. Services to an individual patient will be reimbursed under Part B and services to the general population will be reimbursed under Part A.

Reimbursement for Assistants at Surgery — Medicare reimbursement for assistants at surgery in hospitals with an approved training program will be prohibited if the training program relates to the medical specialty required for the surgical procedure and a qualified individual from the hospital staff is available to assist. Exception will be allowed for the following circumstances: 1) exceptional medical circumstances; 2) a team of physicians is needed to perform complex medical procedures; 3) a physician of another specialty is needed for concurrent care; and 4) other circumstances deemed appropriate.

Elimination of Duplicate Overhead Payments for Outpatient Services — In determining "reasonable" charges for Medicare outpatient services, the Secretary is required to issue regulations to limit the "reasonable charge to a percentage of the amount of the prevailing charge for similar services furnished in a physician's office, taking into account the extent to which overhead costs associated with such outpatient services have been included in the reasonable charge of the facility."

Pensions — Maximum contributions to a defined contribution plan would be reduced from $45,475 to $30,000. Maximum annual benefits under a defined benefit plan would be reduced from $136,425 to $90,000. The cost-of-living adjustments for these dollar limits would be suspended for two years. The new law contains a number of other pension changes.

Physicians' fees increase 7.8% Cost of living increases 11.0%

The physician's service component of the Consumer Price Index rose 7.8% in the second quarter of 1982, well below the all-items index, which rose by 11.0%. The hospital room component increased at an even lower rate of 6.3% over the quarter, according to figures released by the Bureau of Labor Statistics.

In the meantime, the cost of living soared for physicians and everyone else. The CPI jumped 15.6% during June, the largest monthly increase in two years. Medical care rose 10.1%; physicians' services, 9.3%; prescription drugs, 9.2%; and hospital room charges, 6.8%.

Law clarifying FTC's jurisdiction receives MSMA support

Missouri's Congressional Delegation has been urged to support proposals which would clearly state that the Federal Trade Commission does not have jurisdiction over state-regulated professions.

MSMA President John I. Matthews, M.D., informed Missouri's U.S. Senators and Representatives that the Association is in favor of sections of S. 2499 and H.R. 6995, bills to reauthorize the FTC, that prohibit the FTC from taking actions that overrule state laws regarding professions. Dr. Matthews also pointed out that FTC interference in the area of anti-competitive situations is not needed, since professions are subject to the U.S. anti-trust law.

Confusion over jurisdiction has resulted in the FTC's invasion into the American Medical Association's ethics code. In 1979, the FTC issued an order barring the AMA from enforcing its code against misleading advertising by physicians. The order ended in a lengthy legal fight by the AMA that culminated in a 4-4 U.S. Supreme Court decision last March, which had the effect of upholding the FTC's action.

The FTC said its order required that "the AMA may no longer prohibit truthful advertising by its member physicians, but may adopt and enforce guidelines to prohibit advertising that it reasonably believes to be false or deceptive."

According to the agency, the order also "forbids the AMA from interfering with either the amount or form of compensation offered in a contract for physicians' services, but does not restrict professional peer review of fee practices."

Current legislation before the Congress could effect enforcement of that order. The bill, as it presently stands, would provide all state-licensed professionals exemption from the FTC's jurisdiction on grounds that Congress intended the FTC to regulate only businesses.

The Congress should give this bill final consideration in early September.

PR Update

Copies of MSMA's brochure "You and Your Physician — Partners in Reducing Health Care Costs" are still available. Many physicians have distributed copies to their patients through monthly billing statements and through brochure racks in their waiting rooms.

The brochure answers frequently asked questions concerning why health care costs are rising, what physicians are doing about the problem and how patients can help.

Quantities of the brochure are available to members, at cost, at 10 cents each. For more information, contact MSMA Headquarters.

Family MDs form library

A national information center recently established in Kansas City will enable family physicians to call and request information on any professional matter.

Dedicated on August 14, the Herb L. Huffington Memorial Library will be a national repository for historical data regarding the specialty of family practice.

According to Dr. Pat Butler, medical librarian, the center is aimed at family physicians in small communities, who do not have access to medical libraries.

The library, established by the American Academy of Family Physicians (AAFP), can run med-line and data base searches and can make photocopies of specific journal articles. The service is free to AAFP members and is provided for a fee to other physicians.

The facility will develop a collection of journals, books, and reference materials on the subject of family practice; inform physicians of research in progress; and will become a clearinghouse for patient education materials.

For more information call (816) 333-9700.

Mo. infant mortality declines

The infant mortality rate for April was 13.6 deaths per 1,000 live births, according to data from the Missouri Center for Health Statistics. The rate was 5% lower than in April, 1981, when there were 14.1 deaths per 1,000 live births.

According to data from the National Center for Health Statistics, the nationwide infant mortality rate for April was 11.9 deaths per 1,000 live births. The rate was 4% lower than in April, 1981, when there were 12.4 deaths per 1,000 live births.

Problem pharmaceuticals listed

Pharmaceutical drug abuse is becoming a serious problem in Missouri, says Ernest Sjoblom, director of the Missouri Bureau of Narcotics and Dangerous Drugs.

He says 75% of the confiscated drugs analyzed by the state are pharmaceutical or a pharmaceutical mix.

Probably the most abused drugs in the state, he believes, are "T's and blues." These drugs, Talwin and Tripelennamine, are mixed with water and injected for a heroin-like high. The abuse of this drug is surpassing that of amphetamines and speed.

Sjoblom asks Missouri physicians to use caution when prescribing "problem controlled substances." According to the director, abusers frequently seek drugs from physicians who do not know them. They will say that their regular physician is either out-of-town or out-of-state.

Sjoblom lists the following substances as "problem pharmaceuticals":

1. Amphetamine (Schedule II, III and IV)
    - Dexedrine
    - Ritaline
    - Preludin
    - Dioxine
    - Didrex
2. Methaqualone (Schedule II)
    - Quaalude
    - Sopers
    - Parest
3. Oxycodone (Schedule II)
    - Percadan
    - Tylox
4. Hydromorphone (Schedule II)
    - Dilaudid
5. Pentazocine (Schedule IV)
    - Talwin
6. Meperidine (Schedule II)
    - Demerol
7. Pyridoxine (not controlled)

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

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80's

the new federalism and medicine

The fate of President Reagan's "new federalism" proposal, which would shift programs between federal government and the states, is yet to be decided. And only general plans are known so far. Legislation to accomplish the program responsibility shifts is still to be drafted, and officials at the White House and the National Governors Association have reportedly reached an impasse in negotiations for the swap. But the Administration can be expected to continue pressing for action on the proposal, and Presidential Spokesman Larry Speakes has indicated a compromise may yet be reached.

A key component of the "new federalism" is moving financial responsibility for the Medicaid program from the states to the federal government in 1984. At the same time, under the President's proposal, states would accept responsibility for administration and funding of the Aid to Families of Dependent Children (AFDC) and food stamp programs.

While the federal Office of Management and Budget estimates that states, overall, would come out ahead in Fiscal Year 1984, the Congressional Budget Office figures show states would have a net loss in the exchange. Both estimates for individual states, however, show some very large gain or loss figures. In any case, future economic conditions may affect the accuracy of the estimates.

A second part of the federalism initiative calls for returning responsibility for 124 categorical grant programs, including some health programs, back to the states—this is the "turnback" provision. These programs are estimated to cost $30.2 billion in FY1984 (assuming about $5 billion in FY1983 cuts).

To finance the program turnback and equalize gains and losses among states, a federalism trust fund would be established. In FY1984, the fund of $28 million would come from windfall profits taxes ($16.7 billion) and federal excise taxes ($11.3 billion) on gasoline, tobacco, alcohol, and telephone services.

Between 1984 and 1987, states could choose to take the funds they would have received under the 124 categorical programs, either through the same categorical structure or without the categorical restrictions (similar to revenue sharing). In FY1988, these grants would end, and the trust fund would decrease by 25 percent each year. States would then have to raise taxes or cut program budgets accordingly.

Some additional features of the proposal have been announced, but many details are missing. Many questions are unanswered, also. Particularly interesting to physicians will be resolution of such questions as: Will the federal government equalize the state-by-state differences in Medicaid eligibility and benefits? If so, how? Will states be required to continue provision of services at the same level to all recipients now eligible for AFDC and food stamps? Will the initial trust funds be sufficient? Will states be able to maintain quality and quantity of various program services as trust funds are phased out?

We, the physicians of America, must continue our advocacy of high quality medical care for all. Working together, we must ensure that the three "A's" of good health programs—availability, accessibility, and acceptability—are retained. At the national level, the AMA will continue to analyze the proposal and details of it as they are developed. The effects of "new federalism" on health care programs in the future could be vitally important.

Such leadership requires your support. The larger our membership, (now nearly 240,000) the greater our influence and our strength as the only representative for all of medicine. **For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196 collect.**

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1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE: In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy. At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over.

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Give special consideration to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli. Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery. In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e.g., CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes. A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY: Safe use in human pregnancy not established. Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

Observe laboratory parameters at regular intervals. Use with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura. *Central Nervous System:* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. *Gastrointestinal:* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis. *Allergic:* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory:* bronchospasm. *Hematologic:* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura. *Miscellaneous:* reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol. *Clinical Laboratory Test Findings:* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

HOW SUPPLIED

TABLETS

— Each hexagonal-shaped, orange, scored tablet is embossed with an "I" and imprinted with "INDERAL 10," contains 10 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0421-81) and 1,000 (NDC 0046-0421-91). Also in unit dose package of 100 (NDC 0046-0421-99).

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Each hexagonal-shaped, yellow, scored tablet is embossed with an "I" and imprinted with "INDERAL 80," contains 80 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0428-81) and 1,000 (NDC 0046-0428-91). Also in unit dose package of 100 (NDC 0046-0428-99).

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Store at room temperature (approximately 25° C).

7997/882

Reference: 1. Freis, E.D.: Hypertension (Suppl. II) 3:230 (Nov.-Dec.) 1981.

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Editor's Corner

Another Month, Another Malady

The complex world we live in has forced us all to accept a lot of abbreviations in written communications. This is true in the Arts. Have you seen the latest motion picture, "E.T."? In politics, one notes that the GOP usually disagrees with the ADA about the HCL. In the Navy, both a VADM and a RADM outrank a COMO.

The alphabetizing definitely permeates medicine. While thumbing through one of the AMA specialty journals recently, our eye caught the term "EDS" in an article. First to come to mind was the Texas-based organization whose recent departure from the Missouri Medicaid picture was unlamented by most physicians in the state. This was a scientific article, however, and obviously EDS represented a medical program with which we were not familiar. Closer scrutiny revealed the exact name of this latest malady to plague mankind: **Excessive Daytime Sleepiness.**

Here, lurking beyond the peripheral vision of most of the medical community, is an ailment crying for recognition. This disorder has everything going for it: a diagnosis which cannot be ruled out by laboratory tests. An already formulated abbreviation — EDS — to slip into medical conversation. Best of all, a possible remedy by a surgical procedure recognized by Blue Shield (septoplasty).

All sorts of possibilities come to mind. There should be an International EDS Seminar, preferably to be held in Hawaii in the winter. A Mothers' March on EDS seems inevitable, probably led by mothers of teen-age children. *The Journal of EDS*, with the cover printed in soporific blue, comes to mind. Perhaps an endowed chair in EDS at a leading medical center would be in order, presumably a rocking chair.

EDS must be a very insidious disease, in fact, a light touch of it struck me the other day, right after lunch, just when I was reading in the very same journal about "a conclusion supported by immunohistochemical studies of cytoplasmic immunoglobulin that usually exhibit monoclonal staining patterns with the same determinants as those identified by immunoelectrophoresis of serum." Surely, someone can find a cure — nonsurgical, of course.

Jordan W. Burkey, M.D.

dis•ease

/diz-ez/ 1. Chronic dependency upon alcohol; impairing the performance of vital functions. 2. Arrested through effective alcoholism treatment program.

Chances are, during a patient's preliminary examination, alcoholism is not one of your immediate suspicions. But with 10 million Americans suffering from this disease, and over 100,000 in the Kansas City area alone, perhaps it should be. Or perhaps the drinking problem is someone within your patient's family, causing them mental and even physical abuse.

At Bethany Medical Center's Alcoholism Rehabilitation Department (ARD), our professional staff offer both in- and outpatient programs for individuals suffering from alcoholism.

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Our inpatient program covers a 28-day phased treatment in a professional, yet unusual and cheery environment. Patients wear street clothes and participate in a busy, structured, daily routine that includes exercise, counseling, lectures and recreational time.

If you have a patient with a drinking problem, send for our detailed informational brochure, or personally contact one of our professional staff. Outpatient: Paul Anderson, Ph.D., Family Institute of Addiction Treatment, 7840 Washington Ave. Suite 300, K.C., KS. 66112. (913) 334-6300. Inpatient information: Sue Little, Director, Bethany Medical Center, 51 North 12th Street, K.C., KS. 66102. (913) 281-8951.

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℞

Vermox
Tabs #4
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each family
member

DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

Committed to research...
because so much remains to be done.

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Special Review Article

HELMUT HAIBACH, M.D. *and*
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Neonatal Screening for Metabolic Diseases in Missouri

MUCH PROGRESS has been made in the past decade in the detection of metabolic disease in the newborn. Mass screening[1-3] in Missouri and most other states has borne ample fruit. Neonatal hypothyroidism, phenylketonuria (PKU) and other metabolic disorders can be diagnosed in the first few weeks of life. The devastating lifelong effects of these diseases are preventable.

The early successes[4] and problems[1, 3] of neonatal screening in the United States and Europe and the ethical, social and legal dimensions of medical mass screening have been reviewed in detail.[5, 6] In 1965, the Missouri Legislature passed a bill requiring all newborn infants to be tested for PKU and other metabolic diseases as prescribed by the Division of Health. Initially, this program was limited to PKU. In 1979, primary hypothyroidism was included. Today at least 40 of the 50 states have neonatal hypothyroidism screening programs.[7]

The purposes of this article are (1) to report on the experience of neonatal mass screening in our state and (2), to point out areas in which joint efforts of the state and physicians and health care workers in the field can improve the effectiveness of the program. Finally, the paper invites constructive feedback from physicians throughout Missouri.

WHY NEONATAL SCREENING?

The concept of medical mass screening and the specific aspects of PKU and hypothyroidism during childhood merit a brief review as they explain special features and challenges of neonatal mass screening programs.[8]

The purpose of medical mass screening is to identify in a large population a small group of patients who appear to be normal but who have a certain disease. To this end, screening tests are used. They are by nature simple, inexpensive and suitable for mass application. A positive result indicates that the patient is likely to have the condition sought and that further examination is necessary for definitive diagnosis. A negative result indicates that the individual is very unlikely to have the condition and that the expense of further examinations is not justified. Every screening test, because of its intended limitations, generates false positive and false negative results. Effective and efficient screening keeps both at a minimum. It operates at the optimal compromise between the rate of false positive and negative results. The compromise is tailored to the given laboratory technique, the incidence and nature of the disease, the population screened and, last but not least, the budget. These concepts also can be discussed by using

Mass screening for metabolic diseases in the newborn has resulted in the timely diagnosis and successful treatment of phenylketonuria (PKU), primary hypothyroidism and other conditions, thus preventing lifelong physical and mental disability. The Missouri Division of Health, Department of Social Services has screened neonates for PKU since 1969 and for hypothyroidism since 1979 by analyzing filter-paper blood specimens. The authors report this experience in Missouri.

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established definitions such as diagnostic sensitivity, specificity, predictive value and cost effectiveness.

For which type of neonatal diseases should screening be available? In general, several criteria are met as follows:

1. The disease causes lifelong irreversible damage to physical or mental health.
2. The disease is preventable or curable; treatment is not complex.
3. The disease is easily and frequently missed by the usual medical examination of the newborn.
4. A suitable, simple and inexpensive screening test is available.
5. The disease occurs with a frequency that makes mass screening attractive.
6. The screening costs less than the care of all preventable cases.

PKU and primary hypothyroidism in the neonate meet these criteria, when diagnosed and treated in the first few weeks of life.

Briefly, PKU is an inborn error of metabolism of the amino acid, phenylalanine (Phe). The inheritance is autosomal recessive. In the normal individual, dietary phenylalanine is metabolized by hydroxylation to tyrosine. In PKU, phenylalanine concentrations in serum increase to abnormal levels within 24 to 48 hours after birth. As levels rise further, phenylketone compounds are excreted in the urine by an alternate overflow metabolic pathway that has given the disorder its name phenylketonuria.

Continuously increased levels of Phe are associated with progressive irreversible mental retardation and neurological damage during the patient's growth years, presumably beginning in the first weeks or days of life. It is important to realize the diagnosis is only rarely suspected in the neonatal period on clinical grounds since the signs of vomiting, irritability and a "mousy or musty" odor of the urine are very nonspecific and PKU is not a common disorder. Its incidence is approximately one in 10,000 births.[3] For these reasons, mass screening of all neonates is advised. Early diagnosis and treatment with a low phenylalanine diet permit a normal or near normal development mentally and neurologically.[9] In those cases in which development is not normal, treatment is associated with major improvements.

Lately, it has been found that more than one pair of genes code for the phenylalanine hydroxylating enzyme system. The finding explains the existance of several less common variants of PKU. One milder form apparently requires no treatment, while other extremely rare forms show progressive retardation in spite of dietary therapy. A harmless transient condition of hyperphenylalaninemia that resolves within days also occurs and is probably due to liver immaturity. Both tyrosine and phenylalanine levels are increased. The differential diagnosis of hyperphenylalaninemia and its variants, therefore, requires detailed specialized metabolic workup.[2]

Briefly, *neonatal hypothyroidism* is mostly due to thyroid failure either because of thyroid agenesis, dysgenesis, ectopia, hypoplasia, maternal ingestion of drugs or hormonal biosynthetic defects. It occurs in approximately one in 4,000 to 7,000 births. Except for the last of the causes, there is no recognized hereditary pattern although thyroid disease in general has a pattern of familial occurrence. The diagnosis of neonatal hypothyroidism is also evasive because of the paucity and nonspecificity of clinical signs. Lack of thyroid hormone in infancy leads to severe retardation of mental and physical growth, the picture of cretinism.

Early diagnosis and treatment permit normal to near-normal development according to more recent data.[9] Thyroid physiology of the neonate is characterized by a surge of thyroid stimulating hormone (TSH) secretion hours after birth followed by an increase in serum thyroxine (T_4) concentrations two to seven days later.[1] In thyroid failure, the T_4 remains at low levels while the TSH remains increased because of an intact pituitary-hypothalamic feedback mechanism. Decreased T_4 and increased TSH form the basis for neonatal thyroid testing. Consequently, hypothyroidism of pituitary and hypothalamic origin will not be regularly detected by this approach. It appears that the milder degree typical of secondary hypothyroidism does not cause mental retardation.[10] Further, this condition is for screening purposes of lesser concern because of its lower incidence of approximately one in 70,000 births.

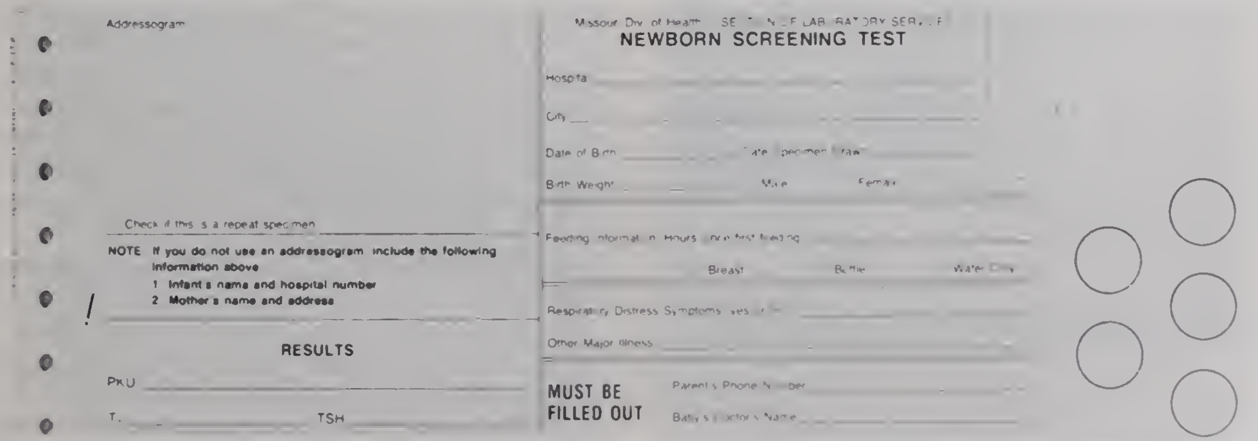
Of differential diagnostic importance is the benign hereditary disorder of thyroxine-binding globulin (TBG) deficiency characterized by the decreased serum hormone binder and, therefore, low circulating thyroxine concentration.[11] However, normal unbound thyroxine levels permit normal tissue thyroid hormone concentrations and, therefore, normal development and normal TSH. Recognition of this harmless trait also requires endocrine workup. Transient neonatal hypothyroidism reverting spontaneously to normal thyroid function has been reported mostly in the European literature.[12] Until sufficient data on this condition are available, periodic reevaluation of thyroid function of all cases identified by neonatal workup appears to be indicated.

In addition to the preventable mental and physical disabilities of these two and similar conditions, there are more preventable losses associated with these illnesses. They include those of wasted human potential, suffering by the patients' families, and loss to society of the individuals' productivity. The preventable losses also can be expressed in economic terms. Cost benefit ratios assess cost prevention and are usually limited to the costs of the screening programs versus the care of the untreated patients. Even with this narrow definition, cost benefit ratios are favorable: both long term that is suited to the long, natural history of PKU and hypothyroidism and short term to fit the usual legislative four-to five-year budget cycle.[13]

The Missouri Program

Our state government recognized these humanitarian concepts and economic opportunities and enacted legislation in 1965 for neonatal mass screening for PKU and other preventable metabolic diseases. Missouri law assigns responsibility to the parents to arrange for screening of the newborn. The state provides the laboratory work. A committee of pediatricians, endocrinologists, neonatalogists, pathologists and hospital administrators representing regions of the state provides constant direction and regular advice. New appropriations in 1979 have permitted the Department of Social Services, Division of Health and its laboratories to expand its programs by adding hypothyroidism to PKU mass screening. Since 1967, approximately 800,000 specimens were screened for PKU and since October, 1979, approximately 120,000 were screened for hypothyroidism. From an organizational point of view, the Missouri screening program can be divided into the following three functions: laboratory analysis, field contacts and follow-up.

Laboratory: The required specimens (Fig. 1) are five circles of filter paper filled with heel-prick blood that can be mailed in regular postal envelopes. The specimen sheet and carbon copies contain biographic and clinical information important for the reporting and interpretation of results which is vital for the success of the program. This specimen is used for both PKU and hypothyroidism screening.



Addressogram

Check if this is a repeat specimen

NOTE If you do not use an addressogram include the following information above
1 Infant's name and hospital number
2 Mother's name and address

RESULTS

PKU

T. TSH

Missouri Div. of Health SECTION OF LABORATORY SERVICE

NEWBORN SCREENING TEST

Hospital

City

Date of Birth Date Specimen Drawn

Birth Weight Male Female

Feeding Information: Hours since first feeding

Breast Bottle Water Only

Respiratory Distress Symptoms yes

Other Major Illness

MUST BE FILLED OUT Parent's Phone Number

Baby's Doctor's Name

Fig. 1 Photograph of a specimen kit. All five circles on filter paper must be completely filled with heel prick blood.

For measurement of phenylalanine, a microbiological assay first described by Guthrie is used.[14] Paper discs punched out of the blood-filled filter paper specimens are placed on a special agar embedded with the spores of the test organism and a special growth inhibitor (beta-2-thienylalanine). High concentrations of phenylalanine in the newborn blood counteract the inhibitor and permit growth of *Bacillus subtilis* that can be quantitated with appropriate standards. Eight milligrams of Phe/dl newborn blood and more are reported as "screening test presumptive positive for PKU"; 4 to 7 mg/dl as borderline; and less than 4 mg/dl as normal or negative results. All results other than normal specify the actual concentration measured.

To test for hypothyroidism, punched out discs are eluted into buffer in test tubes for radioimmunoassays for thyroxine (T_4)[1, 15] and TSH.[1, 16] On a typical assay day, 350 to 400 specimens are analyzed in duplicate for T_4. The lower fifth percentile of all specimens on the assay day from infants bled before the 15th day of age is used to establish a daily cutoff point. All specimens with a T_4 below this cutoff point are additionally assayed in duplicate for TSH. Results above the cutoff point are reported as "screening-test normal."

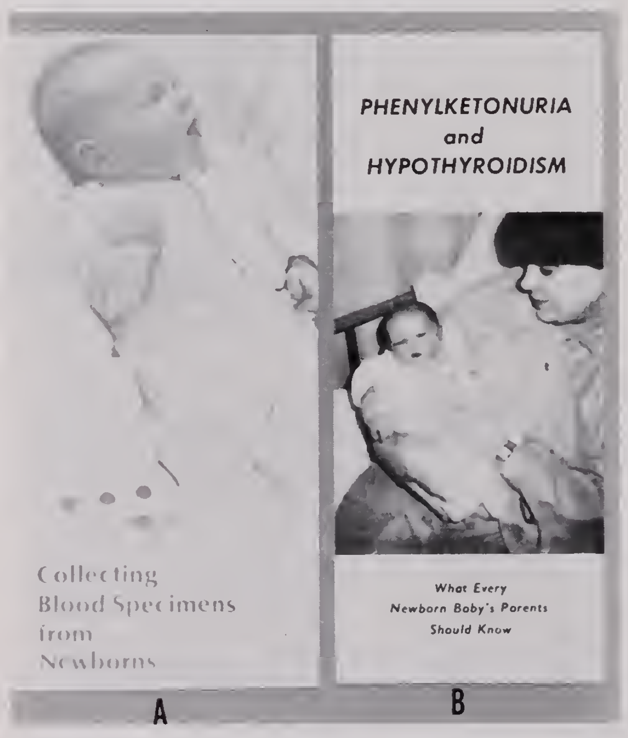


Fig. 2 Title pages of pamphlets *(A)* explaining specimen collection and *(B)* informing parents of newborns. The specimen kit shown in *A* has since been replaced by a newer one as shown in Fig. 1.

Because of the high percentage in Missouri of specimens from infants older than 15 days at the time of bleeding, this approach results in TSH testing of the lowest 9% of all specimens received. Results are reported as "screening test presumptive positive" for primary hypothyroidism when the TSH concentration is 80 u IU/ml or more, as gray zone when 25-80 μ IU/ml and as normal and negative when below 25. There is considerable day-to-day variation of the T_4 cutoff limit. The periodic shifts provide a strong argument for floating cutoff points and against fixed cutoffs. A fixed cutoff point of 8 μg/dl, as used in another program for a limited time in the past, would have resulted in Missouri in the failure to detect three cases of increased TSH due to primary hypothyroidism. A sufficient number of specimens per assay day are required to assure a reasonably safe basis for a floating cutoff.

Regardless of the normal TSH, T_4 concentrations less than 4 μg/dl are usually brought to the referring physician's attention since they suggest TBG deficiency or may suggest pituitary or hypothalamic hypothyroidism. The latter T_4 results are potentially valuable information and are reported even though the program was not designed with such intent. Similarly high T_4 results are conveyed when they appear to be extreme since they may indicate hyperthyroidism. Only many years of experience can establish a data base for a systematic approach to T_4 values higher than normal. Again, feedback from the field is vital.

Field Contacts: A major effort is made to secure adequate specimens from all neonates in the state. A pamphlet provided for parents (Fig. 2-B) explains PKU and hypothyroidism during childhood and is designed to enlist their cooperation. A second brochure for health care professionals (Fig. 2-B) details the technique of heel-prick blood collection and filter paper spotting. Adequacy of the specimen is of utmost importance. The percentage of inadequate specimens with incompletely filled circles or incomplete information has decreased from 8% to 4% in the past 12 months. The change is attributed to the pamphlet and increased field contacts with nurseries for newborns and physicians.

Another major effort is made to promptly and effectively report all results to the field. All screening tests positive for PKU and hypothyroidism are reported by phone to the physician and hospital and are followed by letters. In addition, the parents of the infant are advised by letter to seek medical attention if the physician cannot

TABLE 1
NEONATAL SCREENING IN MISSOURI

	PKU Screening					Hypothyroid Screening		
Year	*1969-1977*	*1978*	*1979*	*1980*	*Total*	*1979*	*1980*	*Total*
# Specimens* screened	547,597	75,967	79,545	82,406†	785,560	15,447§	64,158†	79,605
# Presumptive positive tests	48	6	1	3	58	1	10	11
# Confirmed cases	36	6	1	3	46	1	8	9
# Borderline or gray zone results	370	17‡	15‡	165‡‖	567	22	187	209

* Number of specimens screened in State laboratory, not number of infants; figures differ from births per year because part of the specimens were assayed in local and/or State laboratories.
† Numbers for PKU and hypothyroidism differ because part of the specimens were tested for PKU in both local and State laboratories.
‡ All borderline tests were retested; all those found to be borderline again were normal on work-up.
§ Statewide screening began October 1.
‖ Change in laboratory technique; earlier technique was reinstated in mid-December.

be contacted. Gray zone results are reported by letter to the physician, who will determine by the clinical merits of the case whether or not to consult for an endocrine/metabolic workup or to observe. All negative results are reported on the request form for routine inclusion in the patient's hospital records.

Follow-up: All patients with presumptive positive screening tests should be examined for PKU and hypothyroidism to confirm or refute the diagnosis. A workup includes several highly specialized tests. The Missouri Division of Health has made available a list of pediatric endocrine/metabolic consultants (see Appendix) in different regions of the state who offer their advice. These referral centers are prepared to make the final diagnosis, to be consulted on treatment and its follow-up and to report on the success of the program to the Division of Health. The Division maintains a roster of all children with positive screening results and collects data on their further workup and treatment.

The activities of the Missouri screening program are summarized in Table 1. In 11 years, 58 patients with positive screening tests for PKU were identified and 46 were confirmed. No patients missed by the screening program have been brought to the attention of the Division of Health. From October, 1979, the beginning of screening for hypothyroidism, to December 1980 11 patients with positive screening tests were identified. Of these, nine were confirmed by clinical examination and definitive laboratory tests; one was a false positive screening result. No data are available to the Division on the remaining patient. No patients missed came to attention.

So far, the Division of Health does not have a mechanism or budget to continuously follow the workup, treatment, and progress of all patients identified by a screening test positive for PKU or primary hypothyroidism. The state furnishes, through the Department of Maternal and Child Health, the expensive formula used in treating PKU. Specific funds for the diagnostic studies indicated are not available nor are there resources to follow the borderline patients with screening tests. This group is of particular interest, as it appears likely to contain the patients with hypothyroidism which the program might miss. Follow-up information is vital to the continued success of the program for improvement of its present services, for planning and expansion. This is an area of concern to the Missouri Advisory Committee on Neonatal Screening. At present, the Division of Health has to rely on the cooperation of the physicians caring for the patients and the regional consultants.

CONCLUSION

The neonatal screening program for metabolic disorders of the Missouri Division of Health screened in 11 years approximately 800,000 blood specimens on filter papers for PKU and identified 46 new confirmed cases with PKU. In addition, from October, 1979, the beginning of screening for hypothyroidism, to December, 1980, nine confirmed patients with hypothyroidism were identified.

The future of the program will be determined to a large extent by the following factors:

1. The program's ability to maintain effective contact with health care professionals in the field and collect vital information
2. Improvement of specimen quality; particularly, better timing of specimen collection: more than 24 to 48 hours after beginning of protein feeding to detect PKU and, ideally, 2 to 7 days of age to detect hypothyroidism
3. Its ability to collect follow-up data on all patients with presumptive positive and borderline screening tests in regard to workup, final diagnosis, treatment, adherence to treatment and mental and physical development of the child
4. The advisibility and cost benefit ratios of other debilitating preventable diseases of the neonate for which suitable screening tests become available
5. The existence of the basic apparatus of a neonatal screening program that facilitates addition of screening for other disorders.

ADDENDUM

Since the submission of this manuscript, more data have become available. From January, 1981 to June, 1982, the Missouri Program screened 112,398 patients for PKU and 110,693 patients for hypothyroidism. Twelve cases were presumed positive for PKU and 22 for hypothyroidism of which 11 and 12, respectively, were confirmed by further testing.

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APPENDIX

Consultants for
Hypothyroidism and Phenylketonuria

Cardinal Glennon Children's Hospital
St. Louis University
St. Louis, Mo. 314-865-4000
Dr. James A. Monteleone
Dr. Virginia H. Peden

Children's Mercy Hospital
University of Missouri
Kansas City, Mo. 816-471-0626
Dr. Jerome A. Grunt (hypothyroidism only)
Dr. Campell P. Howard (hypothyroidism only)
Dr. David J. Harris (PKU only)

Cox Medical Center
Springfield, Mo.
Dr. Yvonne C. Bussman 417-831-9810

St. Louis Children's Hospital
Washington University
St. Louis, Mo. 314-454-6000
Dr. Dennis M. Bier
Dr. Sandra M. Blethen
Dr. Alice B. Granoff
Dr. Richard E. Hillman
Dr. Julio V. Santiago
Dr. Virginia V. Weldon
Dr. Neil H. White

University of Missouri
Hospitals and Clinics
Columbia, Mo. 314-882-3996
Dr. David E. Goldstein (hypothyroidism only)
Dr. Calvin W. Woodruff (PKU only)
Dr. Jane Matthews Wray

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Medical Sciences Center
Columbia, MO 65212

> Probably the greatest argument favoring the existence of a Supreme Being is that general belief in one has survived in spite of preachers.
>
> W. E. Wooldridge, Duke of Pearson Creek

GEORGE E. WETTACH, M.D., *and*
CMDR. DAVID S. SMITH, *St. Louis*

Hypothermia in Urban Areas

The Hidden Killer

In the summer of 1981, the City of St. Louis initiated a comprehensive program for the treatment of heat stroke victims. This program grew from a new awareness of the number of people suffering from heat stroke in the St. Louis area during major killer heat waves within the last 70 years. During July of 1980, for instance, approximately 135 persons died from heat stroke.[1] On one day, July 14, 1980, the St. Louis Emergency Medical Service received 374 calls, a record number, primarily in response to this emergency.[1]

After studying the heat crisis during the summer of 1980, city officials proposed an ambitious plan for dealing with similar situations. It involved the development of a potential victim profile, a building profile, a heat alert plan, tactics to educate the community and emergency service/health care strategies.[1]

The average victim of heat-related stress in St. Louis is more than 60 years old, thin, chronically ill, on a reduced income, and living alone on a second or higher floor of a brick building without air conditioning.[1] A demographic sampling also indicates that these potential heat-stressed patients tend to tightly lock all doors and windows to protect themselves from criminals. They may have a fan in the room, but interior temperatures of their brick-wall apartments and homes may continually reach 110 F. Because they live alone, many are not discovered as having heat related maladies until after they have progressed to the point of terminal consequences.

The St. Louis program is interesting and provocative, but it should be remembered that the other end of the temperature spectrum, i.e., hypothermia, also produces an appreciable number of casualties, especially among the same urban group. Recent studies by the National Oceanographic and Atmospheric Administration (NOAA) indicate that of the three primary dangerous weather-temperature related situations, more fatalities are caused by cold weather than by hot weather or periodic high winds, such as in hurricanes or tornadoes.[2]

Although physicians and other health care specialists in the greater St. Louis area have been quick to respond to their civic plan for dealing with summer emergencies, there also is a need to deal with emergencies occurring when the temperature is low. In this regard it has been estimated that as many as 25,000 people in the United States might die annually as a result of the chronic reduction of internal temperature or urban (indoor) hypothermia.[3] Unfortunately, the majority of deaths resulting from hypothermia go unnoticed for a wide variety of reasons.

A great deal has been written about heat stress and other high temperature/fever related maladies, especially in standard medical and first aid texts. However, relatively little has been explained to the medical community about diagnosing and treating hypothermia. Few emergency room staff members are educated in or even aware of the potential for hypothermia in many of the older patients treated during the fall, winter and early spring. Psychologically, physicians are heavily conditioned to respond to fevers, which

A large, elderly population, weather factors and inadequate housing and income in St. Louis have combined intermittently to produce record numbers of hypothermic and hyperthermic disorders that often result in the death of the patients. Hypothermia is insidious in that it may symptomatically mimic other diseases. The authors urge all physicians and emergency room personnel to make a special study of symptoms when weather temperatures are extremely high or low in order to recognize the hypothermic or hyperthermic patient.

Dr. Wettach is Medical Director, St. Louis Emergency Medical Service. Commander Smith, USCG, is Chief, Division of Boating Safety, Second Coast Guard District.

represent more common problems in medical management than hypothermia.

Emergency room personnel usually record temperatures by using medical thermometers with a low-end limit of 94 F. A false high temperature of 94 F in a patient with a lower core temperature and other notable medical problems combine to lead the physician away from the true problem of hypothermia. The use of special low reading rectal thermometers is highly recommended for any patient with a subnormal temperature. The standardized use of these thermometers and the discovery of the true core temperature will increase the recognition of the number of hypothermic victims.

Hypothermia is insidious in that it may symptomatically mimic other diseases. For instance, in hypothermic patients, pneumonia, renal dysfunction, diabetes and mental disorientation (similar to chronic alcoholism) often obscure the basic, underlying causative mechanism. In this latter example, it is believed that a number of supposed "inebriated" derelicts who have died in the "drunk tanks" of city jails were neither derelicts nor drunks, but were victims of hypothermia. Similarly, recently cited are a number of cases in which "apparently dead" victims of acute and chronic hypothermia have spontaneously rewarmed. In several cases, they returned to life after being assumed dead by otherwise proficient medical personnel.[4, 5]

In this regard, it is strongly recommended that more medical practitioners be exposed to and understand the effect of low temperatures, especially in urban areas having potential patients who are elderly and live alone on a low income. The basic preventative measures in both hyperthermia and hypothermia are social. Visits by friends, relatives, social-work professionals or volunteers on a daily basis, as well as the provision of easily understood, applicable educational materials, may do much to reduce the problem. Expansion of programs on both ends of the temperature spectrum is needed. Of special importance is conditioning physicians to perceive underlying causes when diagnosing the surface symptoms indicated above.[6]

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A man weighing 150 pounds approximately contains 3,500 cubic feet of gas, oxygen, hydrogen and nitrogen. At 70¢ per 1,000 cubic feet, this would be worth $2.45 for illuminating purposes. He also contains fat which would make a 15-pound candle. Thus, with his 3,500 cubic feet of gases he possesses great illuminating possibilities.

He also contains 22 pounds and 10 ounces of carbon, which would be enough for 9,360 lead pencils.

There are also about 50 grains of iron in his blood. The rest of the body would supply enough iron to make a spike strong enough to hold his weight.

A healthy man contains 54 ounces of phosphorus. This would make 800,000 matches or enough poison to kill 500 people.

—Author Unknown

JEFFREY L. MARSH, M.D., *St. Louis*

Interdisciplinary Care for Craniofacial Deformities

Significant improvement in habilitation for patients having major deformities of the skull and face has resulted from the recent development of craniofacial surgical techniques in conjunction with the evolution of regional interdisciplinary centers for comprehensive care of such deformities. The author describes the experience of such a center to acquaint physicians with the spectrum of clinical deformities and treatment plans.

Dr. Marsh is Medical Director, Cleft Palate and Craniofacial Deformities Institute at St. Louis Children's Hospital and Associate Professor of Plastic and Reconstructive Surgery and Pediatrics at Washington University School of Medicine.

CONGENITAL DEFORMITIES of the skull and face are particularly disabling because they frequently not only defy effective camouflage, but also are mistakenly equated with mental retardation. Children of normal intellect have been found in institutions after being placed there as infants merely because of abnormal appearance.

During the past decade, the development of craniofacial surgical techniques in conjunction with regional interdisciplinary centers for the comprehensive care of such deformities has allowed affected individuals to enter society free of stigmatization from overt physical defects as well as "imagined" mental deficiencies.[1] In addition, regionalization of care for these uncommon disorders has significantly reduced the morbidity and mortality of intra/extracranial procedures compared to infrequently or itinerantly performed surgery.[2]

The experience of such a center, the Cleft Palate and Craniofacial Deformities Institute at St. Louis Children's Hospital, is presented to acquaint physicians with the spectrum of clinical deformities and treatment plans.

CRANIOFACIAL DEFORMITIES TEAM

The key to successful habilitation for individuals with craniofacial deformities is a comprehensive care plan. This plan must include not only each discipline concerned with the head and its functions, but it must also be formulated through the group effort of the professionals from those disciplines (Table 1).

A number of craniofacial deformities teams have been formed nationwide to meet this interdisciplinary need. The criteria for a vital team are (1) professional representation from each of the concerned disciplines, (2) frequent regularly scheduled team sessions for patient evaluation and care plan formulation, (3) adequate documentation and records storage and (4) effective integration with primary health and education providers. The team should arrive at a diagnosis, educate the parents and affected individual when old enough, formulate a comprehensive treatment plan, provide services not available in the home community, integrate the plan with services available locally and obtain longitudinal followup.

The rarity of craniofacial anomalies and the newness of many therapeutic approaches requires the team to be a research center as well. While the deleterious effects of no treatment on physical and mental health are well known, the long-term results of early treatment are still being recorded.

EPIDEMIOLOGY AND ETIOLOGY

Cleft lip and palate is the most common congenital facial deformity, occurring in about one of 700 births.[3] When the cleft extends cephalad into the orbit and skull, a true craniofacial deformity is present (Fig. 1). The most frequent of such major anomalies is craniofacial microsomia which occurs between one in 3,500 and one in 5,600 births.[4] Other craniofacial anomalies are much rarer.

TABLE I

Anesthesiology	Oral Surgery	Prosthodontics
Audiology	Orthodontics	Psychiatry
Genetics	Otolaryngology	Psychology
Neurology	Pediatrics	Radiology
Nursing	Pedodontics	Social Services
Ophthalmology	Plastic Surgery	Speech Pathology

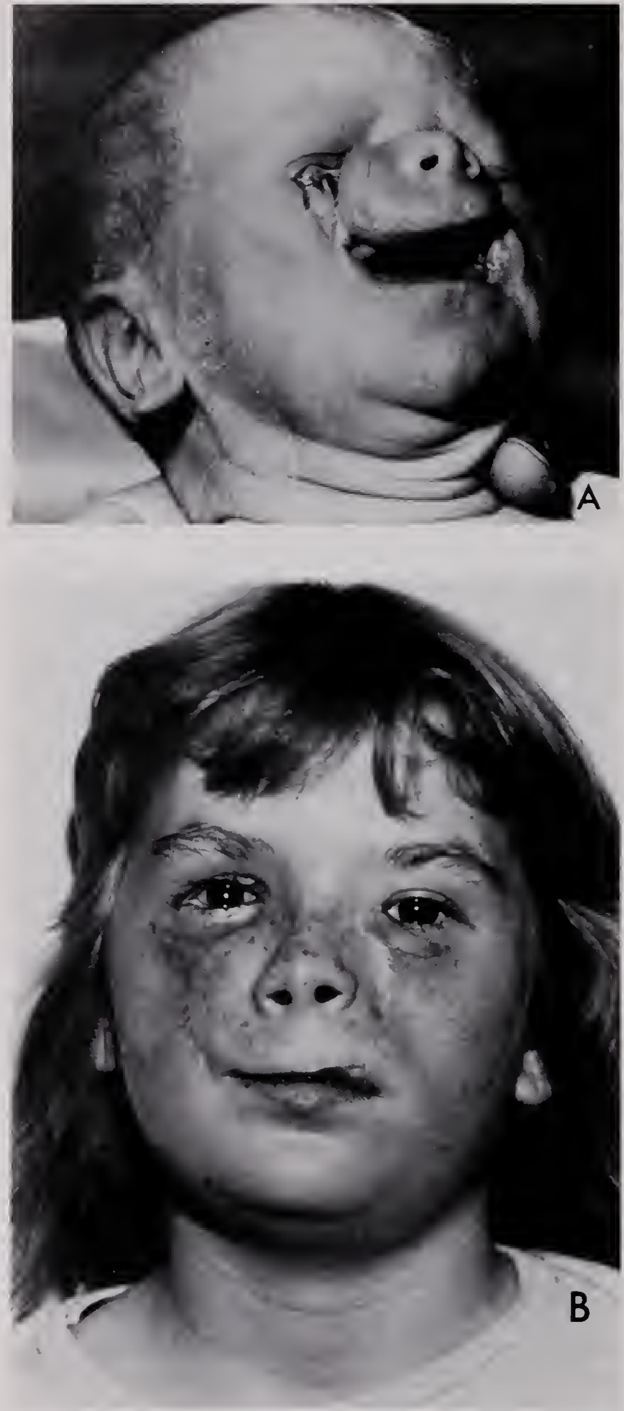

Fig. 1 *(A)* Female infant with bilateral facial clefts: right — complete Tessier #5 ("oro-ocular" cleft with right microphthalmia), left — incomplete Tessier #4 ("paramedian" cleft). *(B)* Patient at 10½ years of age after seven surgical procedures by several surgeons prior to enrollment in the Craniofacial Deformities Institute. The right globe is a prosthesis. The patient underwent interdisciplinary team evaluation in 1980 and a comprehensive habilitation plan was formulated. She had left medial canthoplasty, right lateral canthoplasty and bilateral malar rib augmentation in April, 1981. Further cheek soft tissue and lip reconstruction is planned.

The majority of these disorders occur sporadically and are not heritable. It is presumed that they result from epigenetic (environmental) factors affecting the embryo. For example, craniofacial microsomia occurred frequently among the infants affected by thalidomide.[5] Nonetheless, the causative factors for most of these deformities remain unknown. A minority of the disorders are genetic with most inheritance patterns reported. Mechanisms for the development of the deformities are better understood than is causation. Premature cranial suture stenosis and clefting are thought to produce most of the phenotypes observed.

PREMATURE CRANIAL SUTURE STENOSES

The skeleton of the skull and face consists of a series of bones articulated by sutures. Growth of these various bony "plates" occurs perpendicular to both the sutures and the surface of the plates. When the suture ceases to function, growth perpendicular to the suture ceases as well. This normally occurs during childhood, but it may develop prematurely in utero and producing specific skull deformities characteristic of the suture(s) affected, i.e., craniosynostosis.

Traditional neurosurgical procedures of strip craniectomy inconsistently produced correction of the cranial deformity while generally failing to correct the associated orbital deformities. Newer operations, designed by neurosurgeons and plastic surgeons working in concert on other craniofacial deformities not only result in more normal appearing skulls in a majority of cases but also correct the orbital deformities[6, 7] (Fig. 2). These operations combine extended craniectomies with supralateral orbital reconstructions. They are performed preferentially within the first few months of life to capitalize upon the rapid increase in brain volume during infancy.

In older children, management of cranial and facial deformities secondary to unrelieved or inadequately relieved synostosis often requires mobilization of the entire orbit as well as definitive cranial reshaping (Fig. 3). Thus, current management of craniosynostosis in infancy is directed at the restoration of symmetrical radial brain growth to create a normally shaped skull and prevent secondary orbital and facial distortions. When these distortions become established in older children or adults, reconstruction is possible, but it often requires extensive procedures designed to alter structure rather than to

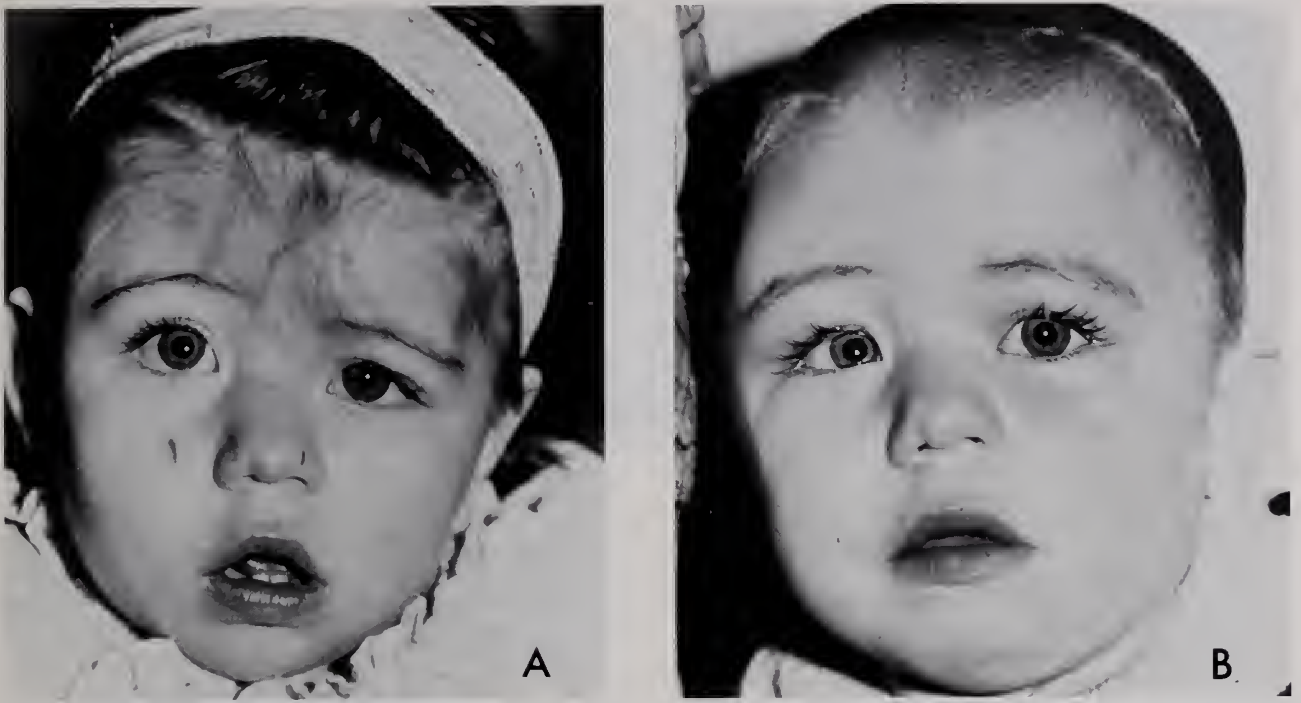

Fig. 2 *(A)* 13-month-old girl born with right unilateral coronal synostosis. Note flattening of the right forehead with brow retrusion and secondary distortion of the "normal" left side with frontal bossing, caudal displacement of brow and orbit dystopia. *(B)* Two weeks after extended right coronal craniectomy, frontal bone revision and repositioning of left supralateral orbit. This was a combined plastic surgery and neurosurgery operation. No further surgery is anticipated. The patient is receiving patch therapy for right amblyopia.

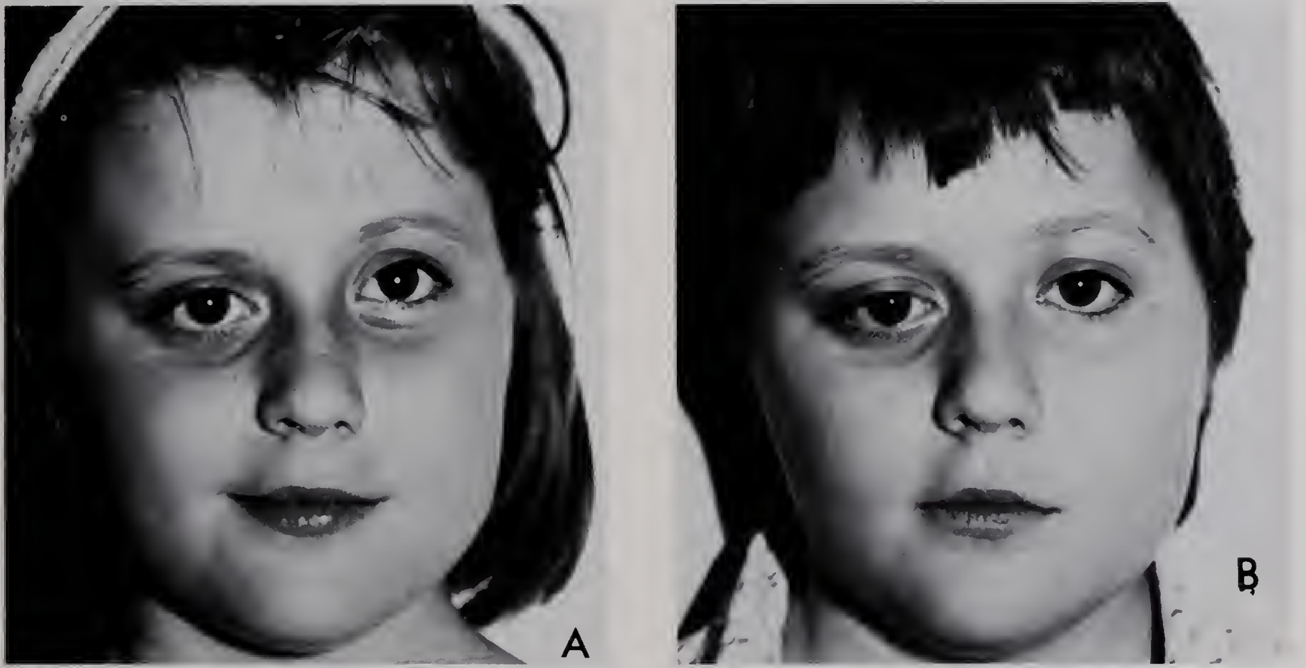

Fig. 3 *(A)* Nine year, 5 month-old girl born with left unilateral coronal synostosis. She underwent traditional strip craniectomy at 11 months of age. Note progression of plagiocephaly deformities: flattening left frontal bone, caudal displacement right brow and orbit (dystopia) and midface asymmetry. Ophthalmologic examination recorded vertical strabismus and alternate supression with preference for the right eye. The patient had moderate psychological problems because of her appearance and avoided social contact. *(B)* Six months after lowering of the left orbit and frontal bone revision as a combined plastic surgery and neurosurgery procedure. This summer, she underwent reduction of the left zygoma and augmentation of the right zygoma to obtain midface symmetry. She has had psychological counseling and her social relations have improved. There has been no significant change in ocular function.

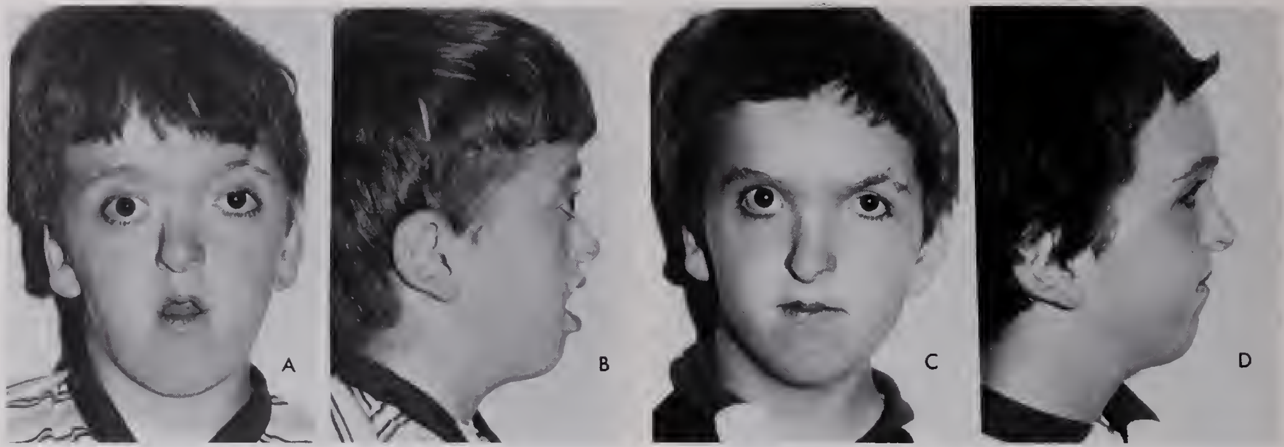

Fig. 4 *(A, B)* Nine year-3-month-old boy with Apert's syndrome who underwent traditional bicoronal and supraorbital strip craniectomies at one month of age. They were repeated at 3½ years of age. Note progression of frontal bone retrusion, asymmetric orbit displacement (dystopias), exorbitism (globe protrusion), midface retrusion and inability to close the mouth (anterior open bite). The patient also has had six operations to release hand syndactylies, right inferior rectus recession for strabismus and palatoplasty for submucous cleft palate. *(C, D)* One year and nine months after combined intra/extracranial frontal bone revision, midface advancement and independent mobilization of the left orbit. The patient developed a frontal sinus abscess ten months after the surgery requiring drainage, extirpation of the sinus and forehead recontouring with methylmethacrylate.

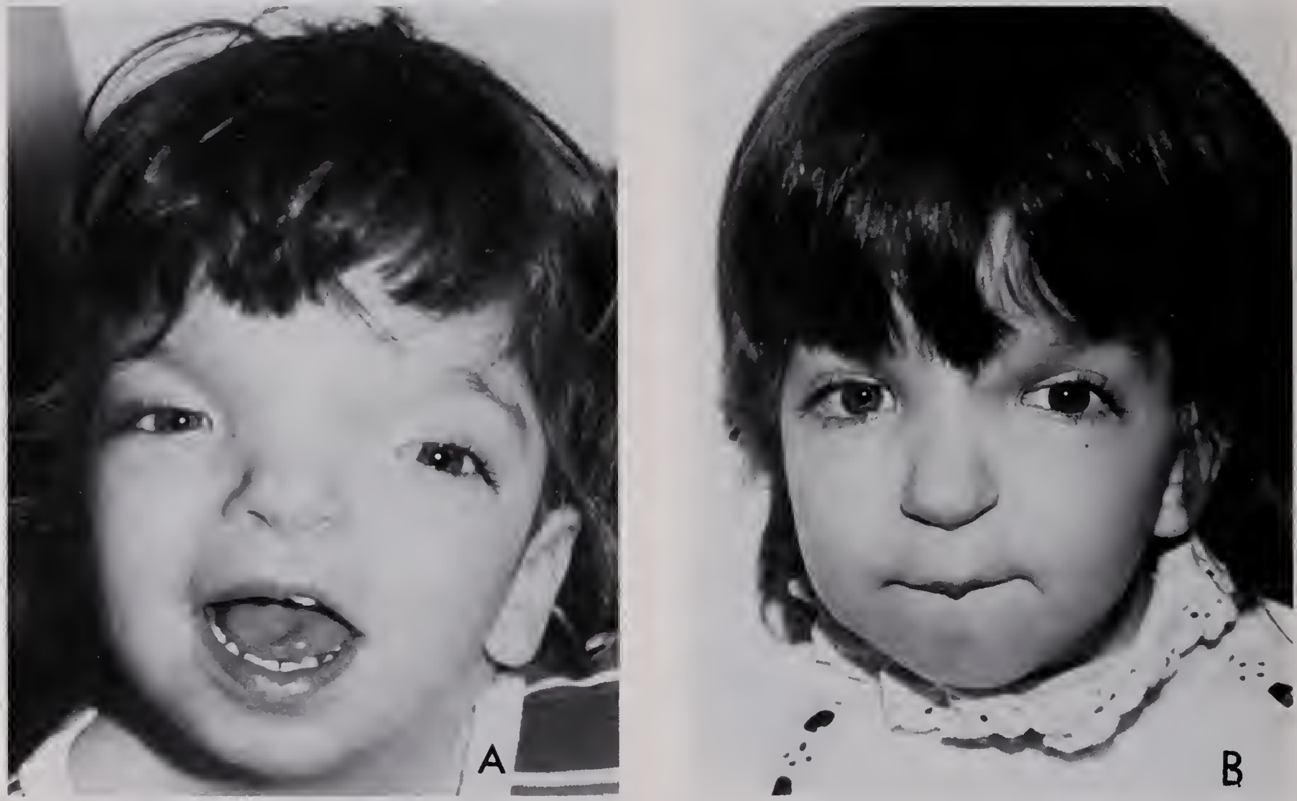

Fig. 5 *(A)* Twenty-three-month-old girl with Pfeiffer's syndrome exhibiting orbital hypertelorism. She previously underwent bicoronal craniectomies and frontal bone revision at two and nine months of age. Sagittal strip craniectomy was performed at ten months. She was followed in the Craniofacial Deformities Institute since birth with particular emphasis on ocular status. She had a trial of patch therapy for probable left amblyopia with limited effect. Therefore, mesial translocation of the orbits was elected at age 2 years, 4 months. *(B)* Twelve months after combined intra/extracranial obital repositioning. 16 mm of bone were removed from the midline reducing her interpupillary distance from 67 mm (>97 percentile for age) to 49 mm (70 percentile for age). Followup ophthalmologic examination noted intermittent exotropia without amblyopia. Revision of the epicanthal folds is planned and she will require midface advancement between ages 4 and 6 to correct the congenital maxillary retrusion.

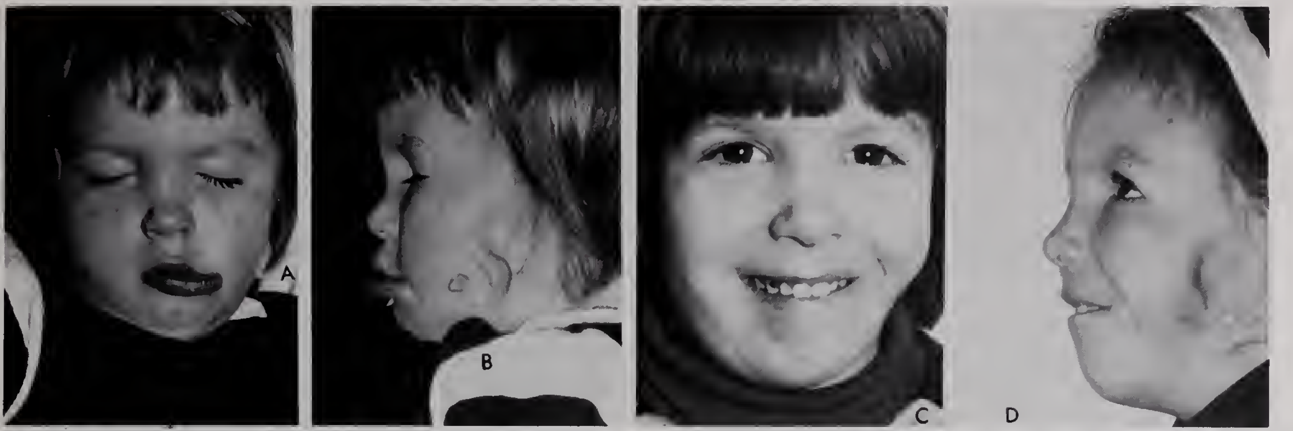

Fig. 6 *(A, B)* Two-year, 1-month-old boy with composite craniofacial microsomia on the left side. Note macrostomia (left oral cleft), hypoplasia of left mid- and lower face soft tissue and bone, and microtia without external ear canal. The anterior and caudal position of the ear remnants suggests arrest in fetal ear migration from the neck to the temporal area. The child has been followed in the Craniofacial Deformities Institute since 13 months of age. A reconstructive plan was outlined to consist of, in sequence: repair of the macrostomia, rotation of the ear remnants, autogenous rib reconstruction of the missing left mandibular ramus and condyle, external ear reconstruction and left face soft tissue augmentation. *(C, D)* Two years after repair of macrostomia and one year after rotation of ear remnants. Patient underwent autogenous rib reconstruction of the absent left mandibular ramus and condyle this summer. External ear reconstruction is scheduled for next year.

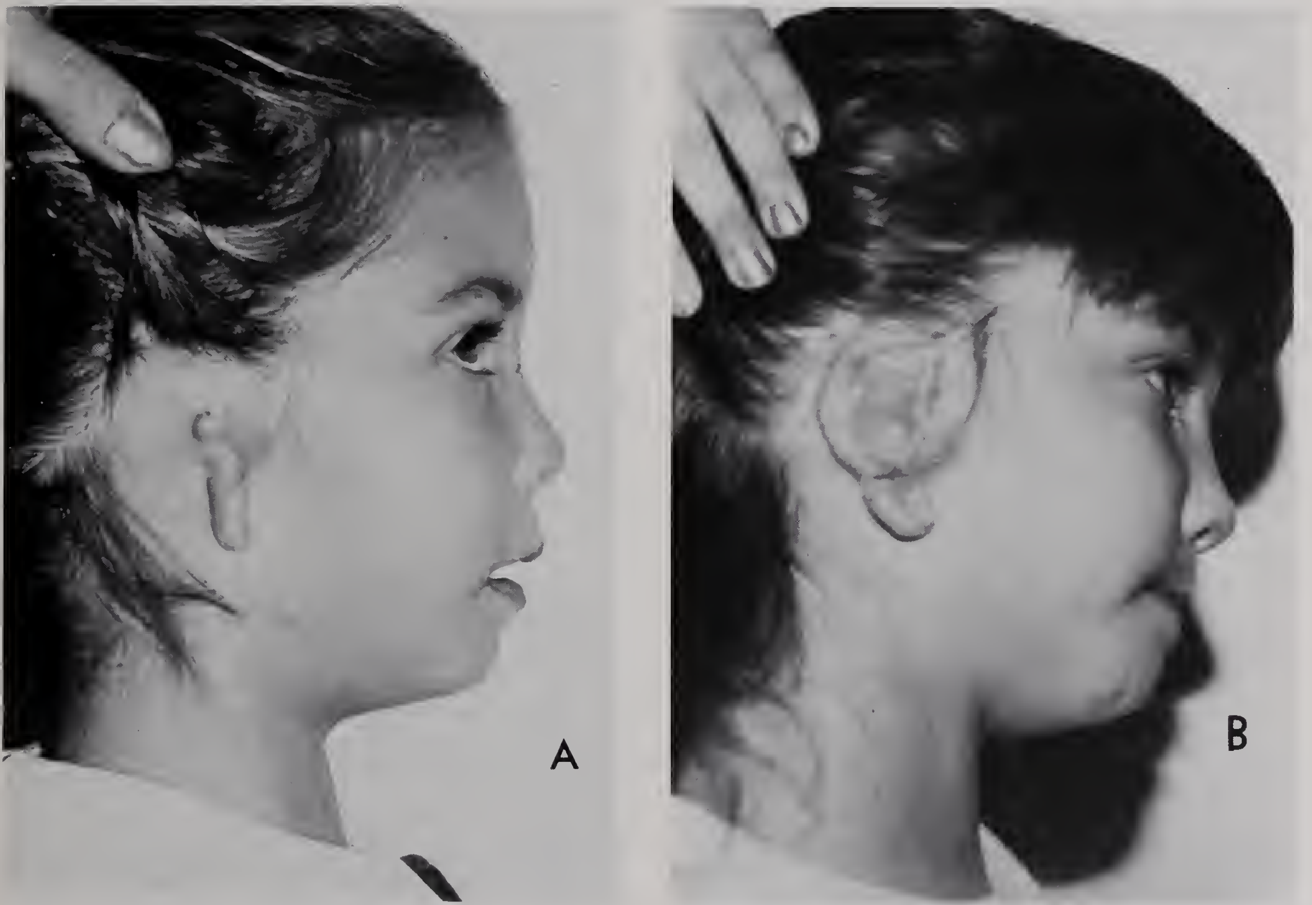

Fig. 7 *(A)* Five-year-old girl with composite craniofacial microsomia on the right side. She had removal of preauricular tags in infancy. Bilateral mandibular ramus osteotomies were done at age 5 years, 2 months as the first stage of her comprehensive reconstruction. Compare the variability of the position in ear remnants with Fig. 6B. *(B)* Fourteen months after completion of three-stage otoplasty using autogenous rib cartilage for the framework.

release obstructed growth potential.

Midface retrusion may occur in conjunction with cranial synostosis. This phenotype is common to a number of syndromes, the craniofacial dysostoses that are subdivided primarily by the presence or absence of specific acral deformities, e.g., Crouzon, Apert, Saethre-Chotzen, Pfeiffer, Carpenter.[8] It is hypothesized that the midface retrusion in these patients results from craniosynostosis at the base of the skull. Unfortunately, this area is not safely surgically accessable.

The treatment plan for infants with craniofacial dysostosis is, thus, bipartite: correction of the upper orbits and skull in the first few months of life followed by midface advancement (craniofacial disjunction) in the preschool years (Fig. 4). The first operation allows the brain to resume unobstructed radial growth and prevents further orbitofacial distortion due to maldirected intracranial growth pressure. The second operation corrects exorbitism, opens the nasopharynx, restores dental occlusion and improves the facial appearance.[9] Strabismus correction, orthodontia and maxillary dentoalveolar advancement (LeFort I osteotomy) may be required in later childhood or adolescence. When older individuals are evaluated for initial treatment, correction of the orbitocranial deformity is synchronous with midface advancement.

ORBITAL HYPERTELORISM

An excessive distance between the pupils as well as the medial orbital walls is referred to as orbital hypertelorism. Hypertelorism is a sign, rather than a diagnosis, that is indicative of either craniosynostosis or craniofacial clefting. In bicoronal craniosynostosis, the osseous restriction to anterior growth of the frontal lobes maintains caudad prolapse of the cribriform plate that obstructs the mesial migration of the widely spaced eyes of the embryo. Similarly, in clefting, mesenchymal defects interfere with orbital migration and may result in encephalocele as well.

A major goal of treatment in the young child is preservation of bilateral vision and restoration of binocular stereoscopic vision. Normalization of facial features to facilitate psychosocial development is also important. Movement of the globe requires surgical mobilization and transposition of the anterior two thirds of the bony orbit[10] (Fig. 5). This surgical procedure was first performed in 1965 and ushered in the current era of craniofacial surgery.

Since this operation may alter a preexisting ocular muscle imbalance or induce a new one, strabismus surgery should be deferred until after orbital transposition. Successful management of these patients requires close collaboration among the ophthalmologist, plastic surgeon and neurosurgeon. Amblyopia remains a significant problem in older patients with uncorrected hypertelorism.

CLEFTING

The first recognizable elements of the human face appear during the fourth fetal week. By the eighth week of gestation, the definitive face is seen. Successful completion of this process requires mesodermal penetration of the ectodermal fusion between central (nasofrontal) and lateral (first and second branchial arch) processes. It is hypothesized that failure in mesodermal migration results in secondary breakdown of ectodermal fusion producing craniofacial clefts.[11] These clefts produce deformities which are either asymmetric, e.g., unilateral cleft lip, or symmetric, e.g., complete bilateral cleft lip. The treatment plan for patients with clefts is highly individualized, based upon the specific anatomic distortions and the resultant functional deficits. For example, the child with craniofacial microsomia* (Fig. 6) requires carefully sequenced management by professionals in a number of disciplines as follows: audiologic evaluation and otologic care of the single normal ear, plastic surgery for the facial clefts as well as the absent external ear (Fig. 7), dental and surgical manipulation of the teeth and jaws, ophthalmologic monitoring of microphthalmos and removal of epibular dermoids, speech therapy when necessary, and psychological support and genetic counseling for the parents.

CONCLUSION

The goal of habilitation for an infant born with a craniofacial deformity is entry into adult society with unobtrusive appearance, intact vision and hearing, intelligible speech, normal dentition and a positive self-image. This goal can be achieved best through a comprehensive interdisciplinary approach. The interdisciplinary team meets at a tertiary care facility to diagnose, formulate the treatment plan, provide services not available locally and monitor the efficacy of care provided. Ideally, affected individuals are evaluated as soon

(Continued on page 630)

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* Synonyms: hemifacial microsomia, first and second branchial arch syndrome, lateral facial dysplasia, Goldenhar's syndrome.

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Serous Otitis Media

A Double-Blind Trial With Sulfisoxazole

This article presents the results of a study of the effectiveness of current therapy for serous otitis media or inflammation of the middle ear. The authors emphasize the value of low-dose sulfonamide therapy.

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ALTHOUGH SEROUS OTITIS MEDIA is a commonly occurring pediatric problem that significantly interferes with hearing and learning,[1] its therapy treatment is not well established. The value of decongestants,[2] hyposensitization[3] and myringotomy tubes[4] is debatable. Low doses of sulfonamide in a treatment of recurrent acute otitis media has been suggested.[5] The present series evaluates a low-dose sulfonamide, sulfisoxazole (Gantrisin®), in the treatment of serous otitis media.

MATERIAL AND METHOD

Thirty children (ages 3 to 6 years) were included in the study. There were 11 girls and 19 boys. All of the subjects were living in a home for abused and/or neglected children.

Half of the patients (n = 15) received 50 mg/kg of sulfisoxazole for one month. The other half (n = 15), the control group, received a placebo. All children were evaluated by otoscopic examination, pure tone hearing tests and by tympanometric testing. Physical examination of the tympanic membrane was done by either two pediatricians or one pediatric nurse practitioner and one pediatrician. Diagnoses were made only when two observers agreed. Pure tone audiometry was done by an audiologist in a noise-free room at a frequency of 250-8,000 cycles per second and intensities of 10 to 100 decibels.

Passing levels for air conduction were set at 20 decibels at all frequencies tested. Tympanometry was done by an audiologist using an acoustic impedance meter. Compliance was measured in cubic centimeters as pressures in the external canal were varied in 50 mm H_2O increments over the range of +250 to −350 mm H_2O. Tympanograms were classified as Types A, B or C according to Jerger's criteria.[6] Type A tympanograms were considered normal. Type B (flat tympanograms) and Type C (negative shifted tympanograms) were considered abnormal.

Statistical evaluation of the deficiencies between the subgroup tested were done by Chi square with Yates correction for continuity of small sample.[7] Compliance with treatment was excellent (96.2%) since these children were in an institution.

RESULTS

At the beginning of the study, all children were judged abnormal in both ears by physical examination, hearing test, and tympanometry.

The number of bilateral failures at the end of one month of therapy in the treated group was 4/15 by otoscopic examination, 5/15 by pure tone audiometric testing and 10/15 by tympanometric examination. There were no patients with unilateral failures. In the control group, 13/15 were considered failures by otoscopic examination, 14/15 were failures by hearing test and 15/15 were considered failures by tympanometry (Table 1).

The differences between control and treated groups were significant ($p < 0.05$) as judged by otoscopy examination and by hearing test. The differences between control and treated groups were right at 0.05 (i.e., $p = 0.05$) when evaluated by tympanometry. Also, as can be seen from the results, otoscopic examination compared very well to hearing test (4/15 vs 5/15 and 13/15 vs 15/15). Tympanometry is slightly more sensitive

TABLE 1
THERAPEUTIC FAILURES IN BOTH TREATED AND CONTROL GROUPS

Groups	*Otoscopy*	*Hearing*	*Tympanometry*
Treated	4/15	5/15	10/15
Control	13/15	14/15	15/15
p*	<0.05	<0.05	$=0.05$

* = p by Chi square with Yates correction for continuity of small samples.[15]

than otoscopic examination or a hearing test (4/15 and 5/15 vs 10/15 and 13/15, and 14/15 vs 15/15).

Discussion

Tympanostomy tube has been recommended for serous otitis media,[4] but the procedure has not been well evaluated. Similar controversy exists in evaluating the therapeutic value of hyposensitization infection[3] and antihistamine-decongestant combinations.[2]

Previous studies have shown the role of infection in Eustachian tube functioning[8] and the value of antibiotic prophylaxis for acute otitis media both in high-risk populations[9] and in non-high-risk populations.[5] The study with non-high-risk population showed that antibiotic prophylaxis in acute otitis media was most valuable in boys under 6 years of age.

The present double-blind study showed the value of low-dose sulfonamide in the treatment of serous otitis media in children under 6 years of age. It also showed a good correlation between otoscopic examination and pure tone audiometry. Tympanometry proved slightly more sensitive in detecting treatment failures than otoscopy or the hearing test.

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Cranial Deformities

(Continued from page 628)

after birth as the parents and infant can travel.

A major purpose of this early consultation is to educate the parents and thereby minimize the fears and confusion that arise from misinformation. Surgical intervention, when necessary, is preferentially performed in infants for craniosynostosis. For other deformities, when biologically feasible, reconstruction is completed by age six. This age is the goal because the child begins to develop psychologic awareness of the social implications of deformity at that time.

Nonetheless, older children and adults who have not been so managed often come for treatment. In these cases, the care plan is revised to accommodate the fixed anatomic deformities and their functional sequelae. In short, a brighter future is now possible for the individual with a craniofacial deformity because of the maturation of intra- and extracranial surgical procedures along with the evolution of comprehensive interdisciplinary care.

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President's Message

A Physician Surplus?

In its latest compilation of statistics published in the booklet, "Physician Characteristics and Distribution in the U.S. — 1981 Edition," 334,028 total physicians were listed in 1970 and 467,679 were listed in 1980. These figures include inactive, unclassified and physicians whose addresses are unknown. Of the physicians listed in patient care in a comparable period of time, there were 278,535 in 1970 and 376,512 in 1980. Again, this is an impressive increase in total numbers of physicians in the United States. It would appear that there is no question that we have a statistically marked increase in the number of physicians in the United States. However, against the definite increase in numbers, there are at least three offsetting factors that may have a definite impact on the total amount of physician time devoted to patient care. These are:

John I. Matthews, M.D.

1. *The number of hours in the American work week*. As we are all aware, there has been a significant decrease in the number of hours that Americans work per week in all fields including medicine. Whereas a few years ago, it was not unusual for a physician to work a 60- or 70-hour week and, in some instances, longer. These figures of total amount of working time per week have gradually been declining. Currently, most Americans are thinking in terms of a 40-hour or shorter work week. Although physicians in general are not thinking in terms of a time span this short for a work week, it is, nevertheless, true that younger physicians are not considering a 60- or 70-hour norm for the work week and it is unlikely that they ever will.

2. *At least 30% of current medical-school entering classes are women*. In many instances, this is 40% or more. Women make excellent physicians and some of our finest practitioners are women. However, the overall track record for the total number of women who remain in active practice throughout the 30- or 40-year professional life span has not been impressive. This record may change for the better and, indeed, most probably will. However, the overall life-time career effort of women physicians must increase considerably to equal that of their male peers.

3. *The time spent in doing procedures*. As medicine has increased in complexity, the number of time-consuming, technical procedures has grown at a very rapid pace. We are all aware that radiology departments have had to be expanded to accommodate CAT scanning, various angiographic techniques and ultrasound investigations. In many instances, cardiologists spend a considerable amount of their productive hours in the angiography laboratory. Also, echocardiology and stress testing consume many hours each week. This also may be said of gastroenterology because gastroscopy and colonoscopy take more and more time as they are more widely applied.

The three factors listed above have the potential of reducing the number of patients cared for in the available time. We certainly will have more physicians, but will the number of patients cared for equal the present.

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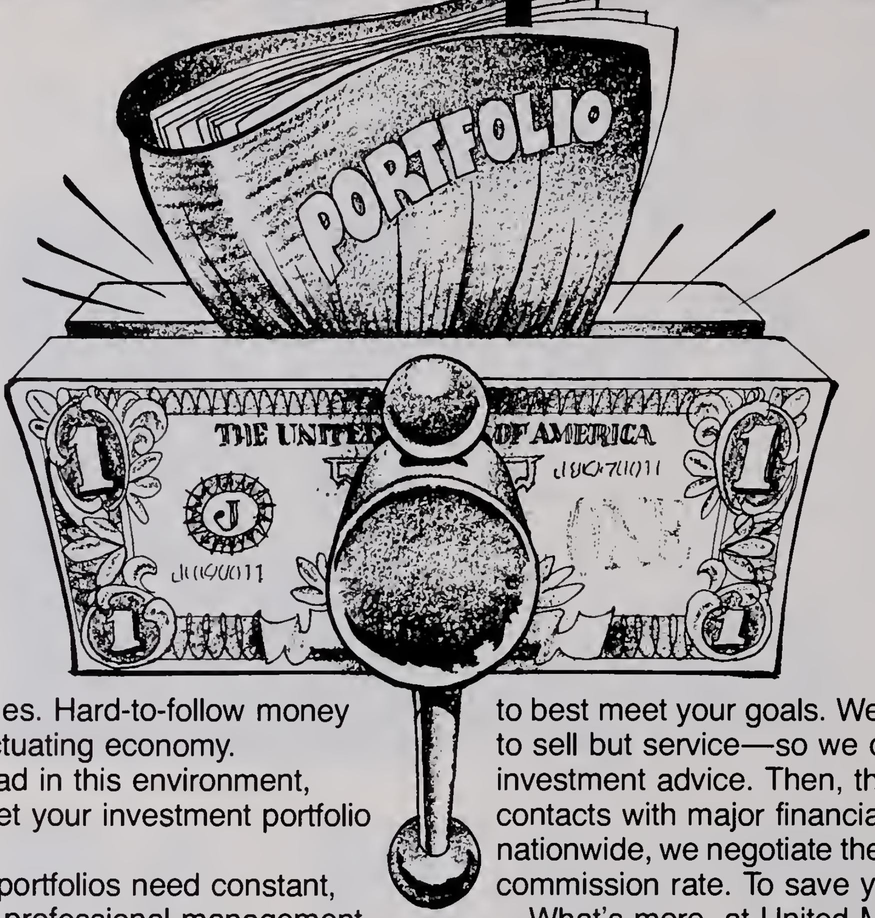

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MSMA Auxiliary

FALL CONFERENCE PREVIEW

Fall! What a delightful time of the year with its flaming foliage, football frenzy and family festivities! It is a time for shifting our attention to different activities, deciding on priorities and scheduling our time to meet our commitments. The seasons passing in sequence remind us of the cycles of our lives — each with its special purpose and meaning.

Mrs. Sam Gaston
President

For MSMA Auxiliary members, fall means implementing plans and projects to meet community health needs and enhancing the image of medicine. It also means attending the annual Auxiliary Fall Conference to assimilate new information and exchange ideas that contribute to productive activity. The Fall Conference will be held at the Sheraton Inn in Springfield on October 20-21 with members of Greene County Auxiliary serving as hostesses. The president, Mrs. James Terry, and conference chairman, Mrs. E. Rule Olson and many members are working to make this an outstanding event.

The Wednesday afternoon seminar will focus on teenage problems of alcoholism and drug abuse. The emphasis will be on preventive programs stressing parental involvement. One of our guests will be Mary Jacobson of Omaha, Neb., co-founder of PRIDE-Omaha (Parent Resources & Information for Drug Education). She is now president of the National Federation of Parents for Drug-Free Youth and serves on the board of the Omaha Area Council on Alcoholism and Drug Abuse plus several other related boards. She will also speak at the banquet on Wednesday evening. We hope many of you, as concerned physicians and parents, will join us for the evening ($12.50 each, reservations required).

The seminar will include a panel workshop by area people who are vitally involved with awareness and prevention programs. We invite you to join us for any portion that your time allows. In presenting this emphasis, the Auxiliary joins the MSMA in implementing a recommendation of the 1982 MSMA House of Delegates, as well as a resolution adopted by the 1982 AMA Auxiliary House of Delegates, to give attention and support to such programs. Dr. Robert Bregant of Jefferson City is serving as chairman of the Ad Hoc Committee appointed by the MSMA president to support the implementation of programs to combat this health hazard to the youth of our communities. Gov. Christopher Bond's administration is actively involved in an Alcohol Abuse Prevention Campaign which also lends its support to our efforts.

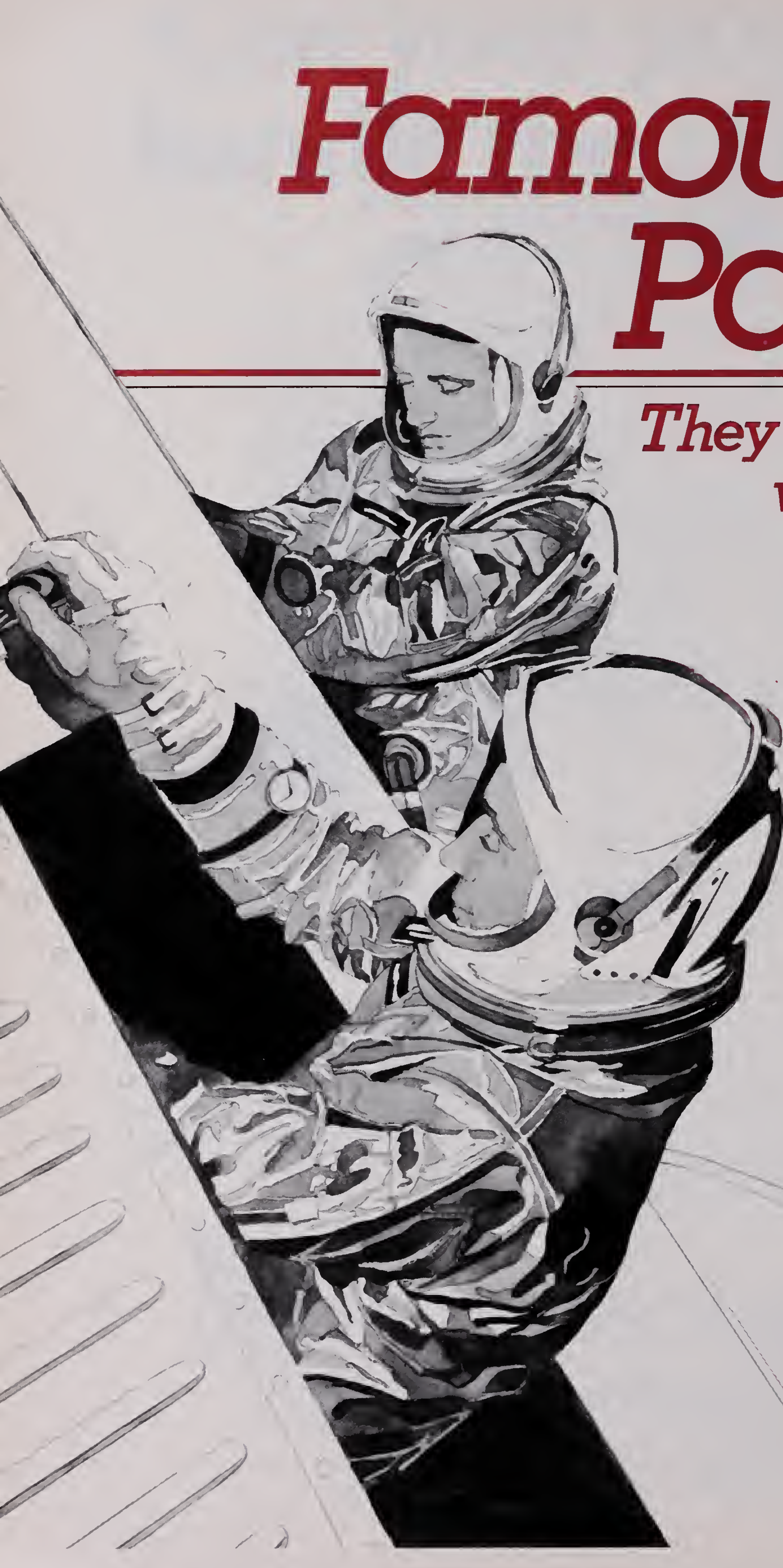
Thursday morning will be devoted to the development of the Auxiliary program. This includes a mini-workshop by the state vice-presidents, committee chairmen and reports from the county auxiliary presidents-elect, plus the RP/MSS (Resident Physician/Medical Student Spouse) respresentative, who will attend the Fall Leadership Confluence in Chicago on October 10-12, along with me and president-elect, Mrs. Donald Sanders. Please encourage your spouse to attend this most important and informative Conference.

The Fall issue of the *Missouri Auxiligram* carries a summary of the 1982 AMA Auxiliary Convention held in Chicago on June 13-16. Mrs. William R. McPhee, Clay County, was installed for a second term as AMA north central regional vice-president. Mrs. Keith Jones, Johnson County, Southern Medical Association Auxiliary president, was a special guest and served also as one of Missouri's five delegates.

The MSMA Auxiliary takes pride in congratulating Dr. Hubert A. Ritter of St. Louis who was reelected to the AMA Board of Trustees at the AMA Convention.

Famous Pairs.

They work so well together.



One of man's most amazing explorations and scientific adventures, the successful Gemini flight program was a triumph of imagination and—teamwork. Two men learned to operate in space, to rendezvous, to dock, and to work outside their spacecraft in the hard vacuum of outer space. Not only did they coordinate their efforts with ground backup, they also complemented each other's activities within the close confines of the space capsule.

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Rectal Cream with Hydrocortisone Acetate
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Once pain and inflammation subside, for dual action recommend regular ANUSOL®—to maintain patient comfort—and TUCKS®—to maintain patient anorectal hygiene.

**Meeting of Am Soc Colon/Rectal Surgeons, May 1980.*

***Based on total prescriptions filled for hemorrhoidal preparations during the first three quarters of 1981. The National Prescription Audit, IMS America Ltd, Sept 1981.*

†*1981 data from leading marketing research organization.*

ANUSOL-HC® Suppositories/ ANUSOL-HC® Cream

Before prescribing, please see full prescribing information. A Brief Summary follows:

Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

Anusol-HC Cream—Adults: After gentle bathing and drying of the anal area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides. Then maintain comfort with regular Anusol Ointment.

NOTE: If staining from either of the above products occurs, the stain may be removed from fabric by hand or machine washing with household detergent.

Store between 59°-86°F (15°-30°C)

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PD-85-JA-0867-P-1 (2-82)

Special Article

Ellis Fischel State Cancer Center

A New Name, A New Beginning

By
MARY LOU KALTENBACH, M.A.*
Columbia

WHAT WAS ONCE Ellis Fischel State Cancer Hospital is now Ellis Fischel State Cancer *Center* (EFSCC). This new emphasis is a result of House Committee Substitute of Senate Bill 717, sponsored by Sen. Roger Wilson, Columbia. The legislation was endorsed by the Missouri State Medical Association, the Missouri Hospital Association, the Missouri Division of the American Cancer Society, the Order of the Eastern Star, and the City of Columbia Chamber of Commerce, among many other organizations and groups. Ellis Fischel has a new outlook and a new beginning that moves it toward being the specialized cancer center that it was years ago.

After Ellis Fischel was originally established in 1940, it became one of the prominent cancer hospitals in the United States. In recent years, the Ellis Fischel Hospital has been adequate, but it has not been able to maintain its former reputation. However, Gov. Christopher Bond signed Senate Bill 717 on April 7, 1982, the purpose of which is to make Ellis Fischel *the* State Cancer Center and to develop it, eventually, into a cancer center of regional importance. The "center" concept is, of course, based on the National Cancer Institute's definition of a comprehensive cancer center that was made possible by the 1971 National Cancer Act.

At the time Governor Bond signed the bill, he appointed members of the State Cancer Commission. They are Rep. Joe Holt, Fulton, chairman; Henry Johnston, St. Louis, vice-chairman; William Kasmann, Columbia, secretary; Margretta Forrester of St. Louis, Larry Dixon of Springfield, and Herbert Kohn of Kansas City. The Director of the Division of Health is an ex-officio member as legislated. Governor Bond will appoint one additional citizen to the seven-member Commission in the coming months.

The enabling legislation was based on the recommendations of two panels appointed by Mohammad N. Akhter, M.D., former director of the Division of Health, and Governor Bond to study the feasibility of maintaining the hospital. The Ellis Fischel Advisory Board was composed of seven citizens from Missouri and chaired by Joseph M. Grana, D.D.S., St. Louis. The Ellis Fischel Blue Ribbon Panel was headed by R. Lee Clark, M.D., president emeritus of M. D. Anderson Hospital of Houston, Tex., and consisted of four additional physicians and administrators from major cancer centers and specialized medical care facilities in the United States.

These panels formulated carefully studied conclusions that, in essence, emphasized Ellis Fischel's potential to become Missouri's specialized cancer center. More specifically, the consensus of the two independent panels was that Missouri, with proper state support and legislation, could have one of the most prominent cancer centers in the United States. The subsequent legislation, which makes the Center essentially autonomous of state government, was passed by both houses of the Missouri General Assembly unanimously and has the full support of the Office of Administration.

The mandate is, then, for Ellis Fischel, in three years, to become a cancer center that is, in large part, self-supporting. Toward this end, the State Cancer Commission appointed Ned D. Rodes, M.D., as acting center director on May 13, 1982.

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* Ms. Kaltenbach is Writer/Editor, Office of Manuscripts, Grants and Contracts, Cancer Research Center in Columbia.

He has been administrative director of the adjacent private, non-profit Cancer Research Center since 1977, and has now been assigned the task of starting the process of creating a cancer center for Missourians. Dr. Rodes, a native of Mexico, Mo., has been a physician in Missouri since 1955.

Part of the process has involved the first official affiliation agreement with the Cancer Research Center that was accomplished in July, 1982. The Cancer Research Center can offer the Ellis Fischel Center internationally recognized research and early detection projects, sophisticated equipment and technology, and scientific expertise. These elements are essential to a cancer center. Because of the legislation, the Ellis Fischel Center also can work out affiliations with other institutions.

Education is another significant aspect of a cancer center, and Ellis Fischel expects to enter the year with an adequate complement of residents and fellows from the University of Missouri Health Sciences Center and the University of South Florida College of Medicine, Tampa. Juan del Regato, M.D., former chief of radiation therapy at Ellis Fischel Hospital and now in Tampa, will be sending residents to the new Center. Other medical schools have indicated an interest in eventually doing the same.

The most important priority for the Cancer Center, however, is recruitment of nurses and physicians, including a permanent medical director who is a nationally recognized oncologist. Priorities are determined by the State Cancer Commission based on recommendations delivered from the Center staff to Dr. Rodes. Recruitment of nurses has begun. The Commission has increased the starting salaries of nurses so that the base pay and raises are comparable with the other five Columbia hospitals.

In a similar manner, recruitment of physicians has started. Thus far, the Center has interviewed two well-qualified, nationally known oncologists, each of whom is interested in being named director of Ellis Fischel State Cancer Center. Others are scheduled for interviews, also. Without doubt, Dr. Rodes can attest to the fact that Ellis Fischel's new life is well-known in the medical network across the United States. In many ways, Missouri is the "center" of attention.

In addition, at this writing, the Center has at least five well-qualified candidates for positions in the Department of Medical Oncology. Three have already visited the Center. Numerous physicians have applied for other staff positions in various specialties. These applications are being reviewed and evaluated thoroughly.

"The Center must engage in thorough recruitment and careful selection efforts," according to Dr. Rodes, "because it must be able to assure referring physicians that the Center is staffed with outstanding oncology specialists. We cannot and will not disappoint the community physicians and their patients. Our treatment and research must be exceptional."

The purpose of the Ellis Fischel State Cancer Center is, then, to develop a tertiary care facility where necessary services can be concentrated to take care of those patients whose disease represents problems beyond routine management and who most physicians in community hospitals might prefer to have treated in a categorical cancer center. Sixty percent of treated cancers recur, and Ellis Fischel will be a referral center for these problem cases and for those that are special problems at the outset. In other words, Ellis Fischel State Cancer Center realizes that its job is to complement, not to compete with, the many capable physicians and community hospitals that are not structured to concentrate, as Ellis Fischel is, on the usually expensive and sophisticated equipment and facilities that specialized cancer treatment and care often demand. Unfortunately, many patients with progressive disease eventually exhaust both their own resources and those of the community. The State of Missouri recognizes this fact and, by statute, Ellis Fischel will continue to treat the indigent cancer patient. The Center, also, will treat nonindigent patients and, now, patients from out-of-state, with physician referrals.

As the Ellis Fischel staff is expanded and equipment is updated, the Center will be in a position to provide a broad range of cancer center specialties and activities, including early detection; basic and clinical research; traditional and innovative methods of diagnosis and treatment; the special care, education and rehabilitation that the cancer patient must have; and education of health care professionals, all of which are possible only in the environment of a cancer center.

With the obvious determined commitment from the State Cancer Commission and Dr. Rodes and the support of Missouri physicians and other citizens, the new Cancer Center should be realizing many objectives within a year. The Ellis Fischel State Cancer Center will keep Missouri Medicine and Missouri health care professionals informed of its progress.

Continuing Education Coming Events

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

Sept. 24-25	The Long Weekend: Rheumatology, Dermatology, Oncology, and Gastroenterology (Alameda Plaza Hotel)
Sept. 24-26	Ozark Chest Conference (Osage House, Lake Ozark. Contact Susan K. Pingleton, M.D. (816) 474-4100)
Oct. 8	Quality Living for the Terminally Ill and Their Families (Hospice Care) (St. Luke's Hospital)
Oct. 22	Present Concepts in Leukemia Pathophysiology (with Leukemia Society of America) (Alameda Plaza Hotel)
Nov. 4-6	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society (Alameda Plaza Hotel)
Dec. 2-4	The Heart 1982 (Alameda Plaza Hotel)
(1983)	
Jan. 15-22	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 11-12	Long Weekend (Crown Center Hotel)
Feb. 12-19	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Ixtapa, Mexico)
March 10-12	Perspectives in Medical Care (Hyatt Regency Hotel)
March 19-26	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Snowmass, Colo.)
April 21-23	Update in Obstetrics and Gynecology (Hyatt Regency Hotel)
May 12-13	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
May 20-21	The Long Weekend (Hyatt Regency Hotel)
June 4	Physical Fitness (Crown Center Hotel)

The Ed Bixby Institute Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4306
***Contact:* Jane L. Jackson, Director of Seminars**

Oct. 6	Practical Approaches to Anxiety/Depression
Nov. 13	Organ Retrieval and Transplantation
Dec. 1	Common Neurologic Problems
(1983)	
Feb. 2	Infectious Diseases and Antibiotics
Apr. 6	Acute and Chronic Pain Management
June 1	Pulmonary Disease: Critical Care
Aug. 3	New Radiology Techniques

Sleep Disorders Center
Deaconess Hospital
6150 Oakland Ave., St. Louis 63139
(314) 645-8510, Ext. 2589
***Contact:* James K. Walsh, Ph.D., Director**

Oct. 21	A Presentation of Project Sleep (St. Louis Marriot Hotel at Airport)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 367-2131
***Contact:* Ronald G. Evens, M.D., Director**

Oct. 12	Wendell G. Scott Lecture By Henry S. Kaplan, M.D.
Nov. 11	City-Wide Radiology Conference — Radiological Management of the Multiple Traumatized Patient
Dec. 13	City-Wide Radiology Conference — Arteriography and Interventional Radiology
(1983)	
Jan. 10	City-Wide Radiology Conference (St. Louis University)
Feb. 14	City-Wide Radiology Conference — CT Experience from an English Cancer Center
Mar. 14	City-Wide Radiology Conference — New Approaches to Measuring Cardiac Function in Nuclear Radiology
Apr. 11	Leroy Sante Lecture (St. Louis University)
May 9	City-Wide Radiology Conference — Pediatric Radiology

University of Missouri-Columbia School of Medicine
Office of Continuing Education
M-240 Health Sciences Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

Sept. 24-26	Fall Meeting — Missouri Ear, Nose and Throat Society (Lodge of the Four Seasons)
Oct. 7-8	Fourth Annual Missouri Perinatal Association Meeting
Oct. 14-16	Fourth Annual Autumn Rheumatology Symposium

St. Louis University Medical Center
Dept. of Orthopedic Surgery
1325 S. Grand Blvd.

Oct. 29-30	Spinal Disorders in Children

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
***Contact:* Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

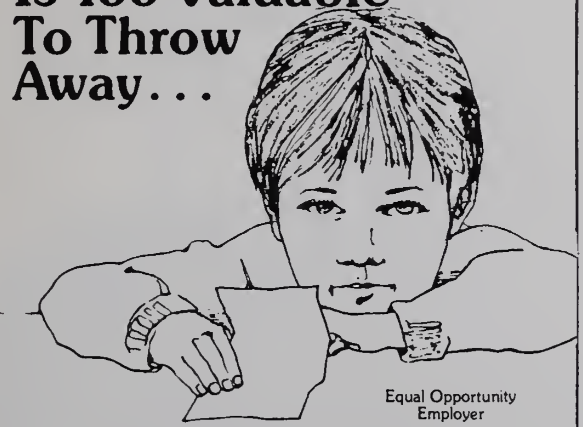
7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

***Contact:* David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

> The best things in life are not free but priceless.
>
> —Benjamin Lichtenberg

A Child's Future Is Too Valuable To Throw Away...



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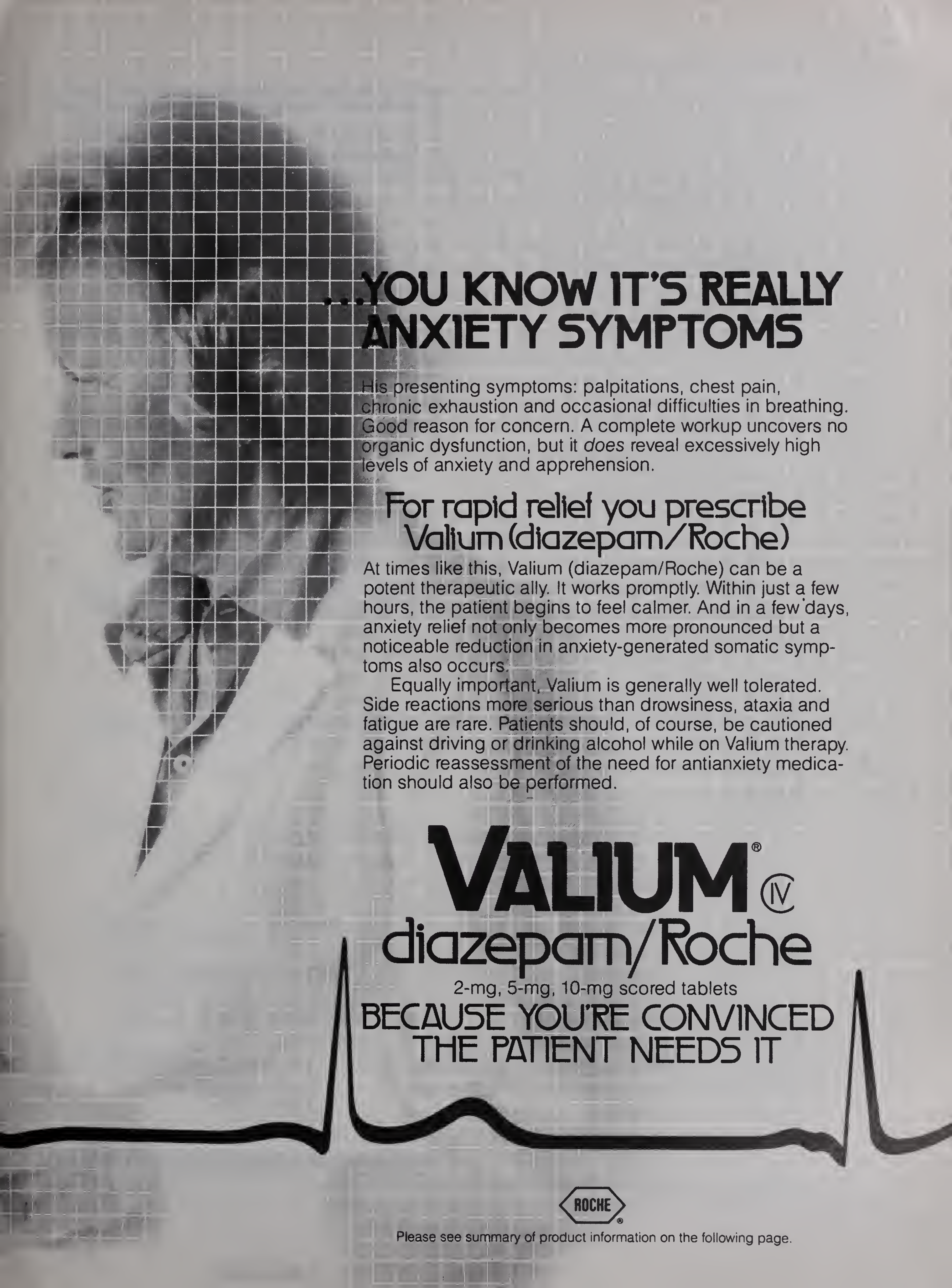
1982-1983 COURSE CALENDAR

	Understanding	*Assessment*	*Practice*
Philadelphia	Oct. 1-4	Jan. 14-17	Mar. 25-28
Kansas City	Oct. 29—Nov. 1	Feb. 4-7	Apr. 29—May 2
San Francisco	Nov. 12-15	Mar. 4-7	May 13-16

For details on courses, certificate programs, and admission, write or call: The Americas Institute of Adlerian Studies, Ltd., 600 North McClurg Court, Suite 2502A, Chicago, IL 60611, (312) 337-5066.

THE PATIENT THINKS
HE HAS HEART TROUBLE...



...YOU KNOW IT'S REALLY ANXIETY SYMPTOMS

His presenting symptoms: palpitations, chest pain, chronic exhaustion and occasional difficulties in breathing. Good reason for concern. A complete workup uncovers no organic dysfunction, but it *does* reveal excessively high levels of anxiety and apprehension.

For rapid relief you prescribe Valium (diazepam/Roche)

At times like this, Valium (diazepam/Roche) can be a potent therapeutic ally. It works promptly. Within just a few hours, the patient begins to feel calmer. And in a few days, anxiety relief not only becomes more pronounced but a noticeable reduction in anxiety-generated somatic symptoms also occurs.

Equally important, Valium is generally well tolerated. Side reactions more serious than drowsiness, ataxia and fatigue are rare. Patients should, of course, be cautioned against driving or drinking alcohol while on Valium therapy. Periodic reassessment of the need for antianxiety medication should also be performed.

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diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets

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Please see summary of product information on the following page.

VALIUM®(diazepam/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
How Supplied: For oral administration, Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100* and 500;* Prescription Paks of 50, available in trays of 10.* Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25,† and in boxes containing 10 strips of 10.†

*Supplied by Roche Products Inc., Manati, Puerto Rico 00701
†Supplied by Roche Laboratories, Division of Hoffmann-La Roche Inc., Nutley, New Jersey 07110

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• *Serving MSMA Since 1943* •

MSMA Members Receive Physician's Recognition Award

Eighty MSMA members qualified for the MSMA-AMA Physician's Recognition Award in May and June, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

May, 1982

Behrooz A. Akbarnia, St. Louis
Arnold V. Arms, Kansas City
Donald L. Baker, Union
Ralph L. Biddy, St. Louis
Frederick M. Brandon, Joplin
Albert D. Cross, Trenton
Walter E. Dean, Maryville
Francisco Del Muro, Kansas City
Donald A. Fakhoury, Kansas City
Sammy L. Farrell, Washington
Robert M. Feibel, St. Louis
Victor H. Ferreira, St. Louis
Theodore W. Garrison, Camdenton
George Gary, Marceline
Nelvin L. Glazer, Kansas City
Wayne O. Gorla, St. Louis
John M. Haight, Kansas City
Thomas M. Hawk, St. Louis
Robert H. Hodge, North Kansas City
James P. Hopkins, Kansas City
Joseph Kanarek, Kansas City
Ruth Kauffman, Versailles
John V. King, St. Louis
Felix F. Larocca, St. Louis
Vance E. Link, Independence
Curtis W. Long, Butler
Robert L. Magee, El Dorado Springs
Francis X. Meier, Jefferson City
Arturo C. Montes, Florissant
Thanh-Huong T. Nguyen, St. Joseph
Prabha Partap, St. Louis
Ricardo Q. Recano, St. Louis
Hunter B. Rogers, St. Louis
Lawrence A. Rues, Kansas City
Luzviminda F. Sicat, Warrensburg
William F. Sill, St. Charles
Charles H. Sincox, Washington
Robert H. Tanner, Jefferson City
Frederick L. Thompson, Nevada
Kirby L. Turner, Poplar Bluff
Sharon E. Waggoner, St. Joseph
Robert L. Wheeler, Harrisonville
Nelson P. H. White, Jefferson City
Russell D. White, Aurora
James W. Willoughby, Kansas City
William Q. Wu, Kansas City

June, 1982

Bruce Barter, Kansas City
Donald R. Bassman, St. Louis
Olga M. Blair, St. Louis
William F. Clary, Springfield
Richard A. Covert, Webster Groves
William C. Critchlow, Sikeston
Joseph W. Eades, St. Louis
Steven T. Fogel, Kansas City
Daniel D. Foote, Springfield
John R. Goheen, Kansas City
Jamil S. Halim, Poplar Bluff
Robert L. Hotchkiss, Kansas City
Lent C. Johnson, Hannibal
Dale E. Johnston, St. Louis
Juan Kang, St. Louis
Revis C. Lewis, Kansas City
Stephen M. Palmer, Columbia
Craig A. Parker, Kansas City
Lawrence A. Pilla, St. Louis
Shankararao Rao, Chesterfield
Joseph A. Rappazzo, University City
Everett L. Saunders, Independence
Dogan H. Savci, St. Louis
John S. Schengber, St. Louis
Daniel L. Schlozman, Kansas City
Vincent S. Shen, Creve Coeur
Carl F. Strauss, Kansas City
Craig P. Tillman, Columbia
Ted C. Vargas, Pacific
Gerardo G. Vergara, Kansas City
Alan S. Wasserman, Chesterfield

NEWS
From the Medical Schools

ST. LOUIS UNIVERSITY

Harold L. Kennedy, M.D., M.P.H., has been named director of the Division of Cardiology at St. Louis University Medical Center.

A former St. Louisan, who graduated from McBride High School and studied electrical engineering at Washington University, Dr. Kennedy comes to the medical center from the University of California-Irvine. He was associate clinical professor of the Memorial Hospital Medical Center in Long Beach and deputy director of the Division of Cardiology.

Dr. Kennedy

In making this announcement, Stephen M. Ayres, M.D., chairman of the Department of Medicine, said, "Harold Kennedy's name is synonymous with excellence in ambulatory electrocardiography and his work with cardiac arrhythmias has gained international acclaim. We are pleased that he is able to join us and feel he will make a substantial contribution to cardiologic care in the community.

Dr. Kennedy earned his M.D. degree from the University of Missouri School of Medicine in 1964 and his M.P.H. degree from Johns Hopkins School of Hygiene and Public Health in 1977.

He served in the Peace Corps in Brazil from 1965 to 1966 and the Indian Health Service from 1966 to 1971. He held his first faculty position at the U.S. Public Health Service Hospital in Seattle, Wash. and has been on the faculty and staff of several medical centers as well as the U.S. Public Health Service Hospital in Baltimore, Md. before his appointment to the University of California-Irvine.

He has given more than 70 national and international presentations, published more than 100 articles in the field of cardiology and authored or coauthored four books in his field.

Circilo Sotelo-Avila, M.D., has been named director of pathology at Cardinal Glennon Memorial Hospital for Children in St. Louis. Dr. Sotelo-Avila, who also holds the title of associate professor of pathology and is division head of pediatric pathology is from Children's Memorial Hospital in Chicago.

Dr. Sotelo-Avila

In announcing his appointment, Thomas Aceto Jr., M.D., medical director of the hospital stated, "Dr. Sotelo-Avila is a nationally recognized pediatric pathologist with considerable experience and training in anatomic and clinical pathology. We are fortunate to have someone with his expertise join us at Cardinal Glennon Hospital."

Dr. Sotelo-Avila earned his M.D. degree from the National Autonomous University of Mexico. He took an anatomic pathology residency at the National Medical Center in Mexico City and at the University of Florida in Gainesville, Fla.; and a clinical pathology residency at Montreal Children's Hospital and Upstate Medical Center in Syracuse, N.Y. His pediatric pathology fellowship was taken at Texas Children's Hospital in Houston.

Carmine J. Coscia, Ph.D., professor of biochemistry, and *Michael B. Laskowski,* Ph.D., associate professor of physiology, have been awarded a three-year, $165,000 grant from the National Science Foundation.

Dr. Coscia and Dr. Laskowski's project is titled, "Subcellular Localization of Opiate Receptors." It entails a study of the types of opiate receptors that are found in the brain and the biochemical mechanism by which opiate receptors are processed and communicate messages from the outside of the cell to the inside. Through this study, important phenomena associated with opiate addiction and tolerance may be explained.

Robert O. Webster, Ph.D., assistant professor of medicine and microbiology, has been awarded a three-year, $92,000 grant from the American

Heart Association.

Dr. Webster's project, "Complement, Leukocytes and Permeability Edema," involves study of the molecular events associated with the Adult Respiratory Distress Syndrome (ARDS), a disease of unknown origin that causes increased pulmonary edema seriously affecting lung function.

Approximately 100,000 to 150,000 people are diagnosed as having ARDS annually with a 50% fatality rate. By studying basic mechanisms of ARDS, a more specific therapeutic agent to prevent or control the disease may be found.

WASHINGTON UNIVERSITY

Eli Robins, M.D., has received one of the most prestigious honors awarded by the American Psychiatric Association to a scientist/researcher.

He received the Foundation's Fund Prize for Research in Psychiatry at the association's 138th annual meeting in Toronto recently for his distinguished contributions to the study of depression and psychiatric disorders, and to the field of psychopathology. He is the fifth recipient.

Internationally recognized for his research on suicide, Dr. Robins is the Wallace Renard Professor in the Department of Psychiatry at Washington University. He is also a psychiatrist with Barnes, Jewish and Children's hospitals.

A 1943 graduate of Harvard Medical School, Dr. Robins interned at Mount Sinai Hospital in New York and served his residency in psychiatry at Massachusetts General Hospital in Boston and McLean Hospital in Boson. He has been a member of the faculty of Washington University School of Medicine since 1949 and served as head of the Department of Psychiatry for 13 years.

His honors include the Gold Medal Award by the Society of Biological Psychiatry in 1974, the Heinrich Walesch Lectureship at Columbia University in 1976, the Paul H. Hock Award by the American Psychopathological Association in 1977, and the Salmon Committee on Psychiatry and Mental Hygiene Medal earlier this year. He has published more than 155 books and articles and has been a member of 13 committees, 22 societies and seven editorial boards.

A $10,000 contribution has been made by the Barnes Hospital Society of Washington University School of Medicine for its Clinical Sciences Research Building Fund. *Samuel B. Guze*, M.D., vice-chancellor for medical affairs, made this announcement.

The gift will help finance construction of the ten-story, 382,080-square-foot building which will house the research facilities of seven clinical departments of the School of Medicine. August, 1984 is the anticipated construction completion date for the new $50 million structure.

The Barnes Hospital Society is comprised of 800 doctors who are pledged to secure the development of Barnes as a source of community service and medical progress. It was formed in 1925 as the Barnes and Allied Hospitals Society.

The American Cancer Society has awarded a $45,000 Institutional Research Grant to Washington University to fund promising new projects in cancer research by junior investigators at the university. This is the 29th time the society has awarded the grant to the university.

Researchers university-wide can apply for funding up to $7,500 to be used over a one-year period to finance cancer-related projects. A committee, chosen by *Chancellor William H. Danforth*, is responsible for allocating the funds. Currently, the committee is chaired by *Elmer B. Brown, Jr.*, M.D.

Although researchers throughout the university are eligible to apply for this funding, most of the recipients have come from the medical school. Many of them have subsequently received additional funding for their projects from the American Cancer Society.

Washington University and Monsanto Company in St. Louis have announced that they have entered into a five-year agreement to conduct biomedical research focused in the areas of proteins and peptides which regulate cellular functions.

The two institutions have signed a general contract totaling $23.5 million, under which individual research projects will be carried out by cooperative arrangements involving faculty at the School of Medicine and Monsanto scientists. About 30% of the efforts will be directed toward fundamental research and 70% toward research which is directly applicable to major human diseases.

Selection of projects to be pursued under the agreement will be made by an advisory committee composed of individuals appointed by Monsanto and Washington University.

Monsanto's participation in the program will begin with a $3 million grant during the first year and rise annually to accommodate expansion in the number and scope of research projects involved. Although the agreement provides for a continuing research program over five years, it can be renewed for a longer period.

David Kipnis, M.D., Adolphus Busch professor and head of the Department of Internal Medicine, will direct the program and serve as chairman of the advisory committee.

As part of the collaborative program, a number of Monsanto scientists will be working in Washington University laboratories to facilitate the transfer of technology to Monsanto.

UNIVERSITY OF MISSOURI-KANSAS CITY

Eight new docents joined the UMKC School of Medicine faculty in July, one of whom is a graduate of the School. *Harriet S. Langley*, M.D., a 1978 graduate, is an assistant professor of internal medicine. She completed a residency in internal medicine at Truman Medical Center, where she was chief resident during her final year there.

Jerome E. Block, M.D. has been appointed associate professor of internal medicine. A graduate of the New Jersey College of Medicine in Newark, Dr. Block was in private practice in Sedalia before moving to Kansas City.

Lawrence H. Dall, M.D., assistant professor of internal medicine, finished a fellowship in infectious diseases at the University of California in San Francisco in June. He is a graduate of Rutgers Medical School.

The School of Medicine began its second affiliation agreement with a major university in the People's Republic of China on June 5 when *Dr. Edward J. Twin*, docent and professor of medicine, represented the University in the signing of an exchange agreement with Harbin Medical University.

In August, 1980, *Dr. E. Grey Dimond*, special consultant to the chancellor, signed a sister-school agreement with the Shanghai Second Medical College. Earlier this year, *Dr. Marjorie Sirridge* was the first UMKC faculty member to be in residence at Shanghai. Also, the 1981 School of Medicine Study Tour members, led by Dr. Twin, spent several days visiting Shanghai and its affiliated hospitals.

A graduate of the University of Chicago Pritzker School of Medicine, *Richard W. McDonnell*, M.D. is an assistant professor of internal medicine. He was a fellow in infectious diseases at the University of Chicago Hospitals and Clinics for three years following his residency there.

George R. Reisz, M.D. finished an internal medicine residency with the UMKC Affiliated Hospitals in 1980. Since then, he has been a fellow in pulmonary medicine here. Dr. Reisz has been appointed as assistant professor.

Timothy T. Schubert, M.D. was in private practice in gastroenterology and internal medicine in Wilkes-Barre, Pa. before joining the faculty as assistant professor. A graduate of Stanford University, he was a fellow in gastroenterology at Nassau County Medical Center on Long Island from 1976 to 1978.

Drs. Frederick DeFeo and *John Moore* have joined the faculty as part-time assistant professors of internal medicine.

David M. Yourtee, Ph.D., associate professor of pharmaceutical chemistry and medicine and director of the Toxicore Laboratory at UMKC, received the AMOCO Foundation, Inc. Good Teaching Award at graduation ceremonies recently. Students choose the recipient of the award, which is given for excellence in undergraduate teaching.

Dr. Yourtee teaches undergraduate courses in pharmaceutical chemistry and methods of drug assay, and graduate courses in toxic substances analysis, research in the pharmaceutical sciences, and special topics in pharmaceutical chemistry. His research programs are in molecular toxicology.

The School of Medicine's 1982 Study Tour will go to the British Isles in October to meet with other physicians and health professionals and tour several medical facilities. Scheduled stops on the tour include London, Cambridge, Loch Lomond, Glasgow, Liverpool, Stratford-on-Avon, Salisbury and Llanberris.

David Swoap, undersecretary of the U.S. Department of Health and Human Services, was at the School of Medicine in May to present the Secretary's Distinguished Leadership Award to *Richard and Annette Bloch*. The Blochs recently opened the R.A. Bloch Cancer Management Center in Haag Hall on the Volker Campus of UMKC.

The Cancer Center is a nonprofit center that will give patients quick access to cancer-fighting resources and the advice of a team of specialists, utilizing the multidisciplinary approach to cancer management.

The School of Medicine welcomed the Class of 1988 on June 16-17. New students arrived on campus for orientation and a welcome banquet. Forty-six percent of the incoming class are women and 54% are men. Of the 90 students, 67% are from urban areas; 33% from rural areas; 19 students are from Jackson County; and 26 students are from St. Louis County. A majority of the students had ACT scores in the 90th percentile or above.

New Members

Dennis L. Abernathie, M.D., 3205 Lansing, P.O. Box O, Columbia 65201, has become a member of Boone County Medical Society. Dr. Abernathie is a native of St. Louis, received his preliminary education at the University of Missouri-Rolla and his M.D. degree at the University of Missouri-Columbia in 1975. He specializes in orthopedic surgery.

Sandra Jane Ahlum, M.D., 711 Grand Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Ahlum is a native of Philadelphia, Pa., received her preliminary education at Carleton College and her M.D. degree at the Medical College of Pennsylvania in 1978. She specializes in obstetrics and gynecology.

Syed S. Ali, M.D., 2120 Madison Ave., Granite City, Ill. 62040, has become a member of St. Louis Metropolitan Medical Society. Dr. Ali is a native of India, received his preliminary education at Jancia College and his M.D. degree at Dow Medical College in 1970. He specializes in neurology and child neurology.

Philip A. Bear, D.O., Apt. 101, 4901 Wornall Rd., Kansas City 64112, has become a member of Jackson County Medical Society. Dr. Bear is a native of Council Bluffs, Iowa, received his preliminary education at Pitzer College and his D.O. degree at the College of Osteopathic Medicine-Des Moines in 1981. He specializes in internal medicine.

Ellis R. Berkowitz, M.D., 510 Francis St., St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Berkowitz is a native of Englewood, N.J., received his preliminary education at Washington University and his M.D. degree at Washington University in 1973. He specializes in internal medicine.

James S. Bower, M.D., 303 T. Research Medical Office Tower,6420 Prospect Ave., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Bower is a native of Tacoma, Wash., received his preliminary education at Harvard College and his M.D. degree at Columbia University in 1972. He specializes in internal medicine and pulmonary diseases.

James K. Bradley, M.D., 2929 Baltimore, Suite 545, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Bradley is a native of Salina, Kan., received his preliminary education at Duke University and his M.D. degree at Emory University in 1977. He specializes in internal medicine and pulmonary diseases.

Angela Calton, M.D., 8550 Holmes, Suite 130, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Calton is a native of Kansas City, received her preliminary education at the University of Missouri-Columbia and her M.D. degree at the University of Missouri-Kansas City in 1978. She specializes in family practice.

James H. Ceaser, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Ceaser is a native of Chicago, Ill., received his preliminary education at DePauw University and his M.D. degree at Northwestern University in 1976. He specializes in cardiology.

William T. Chao, M.D., 550 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Chao is a native of Mason City, Iowa, received his preliminary education at the University of Illinois and his M.D. degree at the University of Illinois in 1979. He specializes in pediatrics.

Edwin L. Clonts, M.D., 8600 N.W. 64th, Parkville 64152, has become a member of Jackson County Medical Society. Dr. Clonts is a native of Chattanooga, Tenn., received his preliminary education at Furman University and his M.D. degree at the University of Tennessee in 1975. He specializes in family practice.

Avrahm Cohen, M.D., 2411 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Cohen is a native of Montreal, Quebec, received his preliminary education at McGill University and his M.D. degree at McGill University in 1975. He specializes in internal medicine and cardiology.

David J. Costigan, M.D., 10007 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Costigan is a native of St. Louis, received his preliminary education at Boston College and his M.D.

(Continued on page 651)

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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The efficacy of Dalmane has been studied in over 200 clinical trials with more than 10,000 patients.[3-15] During long-term therapy, which is rarely required, periodic blood, kidney and liver function tests should be performed. Contraindicated in patients who are pregnant or hypersensitive to flurazepam.

Please see summary of product information on following page.

References: 1. Williams RL, Karacan I: Introduction, chap. 1, in *Sleep Disorders: Diagnosis and Treatment*, edited by Williams RL, Karacan I, Frazier SH. New York, John Wiley & Sons, 1978, p. 2. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Kales A *et al: JAMA 241*:1692-1695, Apr 20, 1979. **4.** Kales A *et al: J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al: Behav Med 5*(10):25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Zimmerman AM. *Curr Ther Res 13*:18-22, Jan 1971. **14.** Kales A, Kales JD: *Pharmacol Physicians 4*(9):1-6, Sep 1970. **15.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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degree at the University of Missouri-Columbia in 1976. He specializes in internal medicine and gastroenterology.

Richard L. Cronemeyer, M.D., 6700 Troost, Suite 352, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Cronemeyer is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1977. He specializes in diagnostic radiology.

Tommy E. Cupples, M.D., 937 Broadway, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Cupples is a native of Hayti, received his preliminary education at the University of Tennessee and his M.D. degree at the University of Tennessee in 1978. He specializes in diagnostic radiology.

Louis V. Deane, Jr., M.D., 621 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Deane is a native of Quincy, Mass., received his preliminary education at Holy Cross College and his M.D. degree at Boston University in 1973. He specializes in internal medicine and cardiovascular diseases.

Jay D. Dix, M.D., University of Missouri Health Sciences Center, Department of Pathology, Columbia 65201, has become a member of Boone County Medical Society. Dr. Dix is a native of Heidelberg, Germany, received his preliminary education at Ohio Wesleyan College and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in pathology and forensic pathology.

Samuel E. Felt, M.D., 4949 Rockhill Rd., Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Felt is a native of Wellington, Kan., received his preliminary education at Wichita State University and his M.D. degree at the University of Kansas in 1972. He specializes in anatomic and clinical pathology.

John Gillispie, M.D., 4949 Strong Ave., Kansas City, Kan. 66106, has become a member of Jackson County Medical Society. Dr. Gillispie is a native of Ft. Leonard Wood, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1981. He specializes in internal medicine.

(Continued on page 652)

Anna Marie Harkins, D.O., Apt. 165, 4203 N.E. Davidson Rd., Kansas City 64116, has become a member of Jackson County Medical Society. Dr. Harkins is a native of Fort Worth, Tex., received her preliminary education at Duke University and her D.O. degree at Texas College of Osteopathic Medicine in 1980. She specializes in internal medicine.

Sultan A. Hayat, M.D., 11115 New Halls Ferry Rd. #301, Florissant 63033, has become a member of St. Louis Metropolitan Medical Society. Dr. Hayat is a native of Pakistan, received his preliminary education at Edwards College and his M.D. degree at King Edward Medical College in 1970. He specializes in internal medicine and cardiology.

Edward R. Jenkins, M.D., Roubidoux Medical Park, Waynesville 65583, has become a member of Mid-Missouri County Medical Society. Dr. Jenkins is a native of St. Louis, received his preliminary education at Pepperdine University and his M.D. degree at the University of Southern California in 1961. He specializes in family practice.

Lent C. Johnson, III, M.D., Hannibal Clinic, 711 Grand Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Johnson is a native of Bethesda, Md., received his preliminary education at Bowdoin College and his M.D. degree at Howard University in 1979. He specializes in family practice.

Dilip H. Kakaiya, M.D., 211 Teaco Rd., Kennett 63857, has become a member of Dunklin County Medical Society. Dr. Kakaiya is a native of India, received his preliminary education at the University of Bombay and his M.D. degree at Grant Medical College in 1971. He specializes in general surgery.

Stephen M. Keller, M.D., 615 S. New Ballas, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Keller is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in radiology.

George Kerkemeyer, M.D., 2910 St. Mary's Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Kerkemeyer is a native of East St. Louis, Ill., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1979. He specializes in internal medicine.

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Richard L. Keis, M.D., 1819 Broadway, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Kies is a native of Cape Girardeau, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1978. He specializes in ophthalmology.

Alfred S. Kumar, M.D., 11133 Dunn Rd., St. Louis 63136, has become a member of St. Louis Metropolitan Medical Society. Dr. Kumar is a native of New Delhi, India, received his preliminary education at Delhi University and his M.D. degree at Christian Medical College in 1974. He specializes in anesthesiology.

David W. Landau, M.D., 11155 Dunn Rd., St. Louis 63136, has become a member of St. Louis Metropolitan Medical Society. Dr. Landau is a native of St. Louis, received his preliminary education at Swarthmore College and his M.D. degree at Stanford University in 1977. He specializes in internal medicine and gastroenterology.

Larry E. Legler, M.D., 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Legler is a native of Kansas City, Kan., received his preliminary education at St. Louis University and his M.D. degree at Baylor College in 1975. He specializes in family practice.

Marek B. Lepkowski, M.D., 600 E. 13th, Sedalia 65301, has become a member of Pettis County Medical Society. Dr. Lepkowski is a native of Warsaw, Poland, received his preliminary education in Poland and his M.D. degree at the Medical Academy in Warsaw in 1959. He specializes in urological surgery.

Bernard Levi, M.D., 4949 Rockhill Rd., Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Levi is a native of Sweden, received his preliminary education at Wayne State University and his M.D. degree at the University of Michigan in 1972. He specializes in internal medicine and cardiology.

Carol B. Loeppky, M.D., 113 W. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Loeppky is a native of Waco, Tex., received her preliminary education at the University of Missouri-Columbia and her M.D. degree at the University of Missouri-Columbia in 1973. She specializes in internal medicine and infectious diseases.

(Continued on page 654)

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Rodney V. McFarland, M.D., 113 Hickory, Neosho 64850, has become a member of Ozarks Medical Society. Dr. McFarland is a native of Manhattan, Kan., received his preliminary education at the University of California-Berkeley and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in family practice.

Douglas A. McIntosh, M.D., 1310 Brookshire Rd., Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. McIntosh is a native of Waterloo, Iowa, received his preliminary education at Wartburg College and his M.D. degree at the University of Iowa in 1976. He specializes in emergency medicine and family practice.

John A. Memken, M.D., 2910 St. Marys Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Memken is a native of Bloomington, Ill., received his preliminary education at Illinois Wesleyan University and his M.D. degree at Southern Illinois University in 1979. He specializes in family practice.

N. Eugene Morrow, M.D., 321 Professional Bldg., Springfield 65806, has become a member of Greene County Medical Society. Dr. Morrow is a native of Kansas City, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in dermatology.

Caprice M. Olomon, M.D., 125 E. Lockling Ave., Brookfield 64628, has become a member of Grand River Medical Society. Dr. Olomon is a native of Garden City, Kan., received her preliminary education at the University of Kansas and her M.D. degree at the University of Kansas in 1979. She specializes in radiology.

Jorge Cesar Paradelo, M.D., 6420 Prospect, Suite T-513, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Paradelo is a native of Rios, Argentina, received his preliminary education at Cologio de Secundario and his M.D. degree at the University de Rosario in 1971. He specializes in therapeutic radiology.

Manuel P. Pardo, M.D., 17221 E. 23rd, Suite 109, Independence 64057, has become a member of Jackson County Medical Society. Dr. Pardo is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1962. He specializes in psychiatry.

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Jeannie O. Perez, M.D., 1402 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Perez is a native of Manila, Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of Santo Tomas in 1972. She specializes in pediatrics, allergies and immunology.

Vernon D. Rowe, M.D., Suite 420, 4320 Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Rowe is a native of Washington, D.C., received his preliminary education at Duke University and his M.D. degree at Duke University in 1969. He specializes in psychiatry and neurology.

Robert S. Ryan, M.D., Tower Plaza, Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Ryan is a native of Sioux Falls, S.D., received his preliminary education at the University of Utah and his M.D. degree at Southern Illinois University in 1978. He specializes in obstetrics and gynecology.

George A. Saleh, D.O., 6908 W. 52nd Place, Mission, Kan. 66202, has become a member of Jackson County Medical Society. Dr. Saleh is a native of Jerusalem, Jordan, received his preliminary education at the University of Missouri-Kansas City and his D.O. degree at Kansas City College of Osteopathic Medicine in 1977. He specializes in obstetrics and gynecology.

In Memoriam

David V. Miller, M.D., 1503 Lurlyn Dr., Poplar Bluff 63901; graduate of St. Louis University, 1953; member of Butler-Wayne-Ripley-Carter County Medical Society; aged 63; died May 19, 1982.

Joseph J. Dzubay, M.D., 4306 Stonecrest, St. Joseph 64506; graduate of Creighton University, 1964; member of Buchanan County Medical Society; aged 44; died May 23, 1982.

Harold B. Rapp, M.D., 937 Broadway, Cape Girardeau 63701; graduate of Washington University, 1947; member of Cape Girardeau Area County Medical Society; aged 61; died May 28, 1982.

Seth S. Barnes, M.D., 610 Northview Dr., Cape Girardeau 63701; graduate of University of Tennessee, 1935; member of Cape Girardeau Area County Medical Society; aged 75; died June 5, 1982.

John A. Hartwig, M.D., 12541 Postgrove Dr., St. Louis 63141, graduate of Washington University, 1926; member of St. Louis Metropolitan Medical Society; aged 82, died June 15, 1982.

Harry L. Acker, M.D., 950 Francis, St. Louis 63105; graduate of University of South Carolina, 1950; member of St. Louis Metropolitan Medical Society; aged 62; died June 19, 1982.

Ben H. Senturia, M.D., 3 Clearmont La., St. Louis 63124; graduate of Washington University, 1935; member of St. Louis Metropolitan Medical Society; aged 71; died July 7, 1982.

Harry F. O'Brien, M.D., 408 Harvard, Mexico 65265; graduate of University of Louisville, 1931; member of Audrain County Medical Society; aged 77; died July 13, 1982.

LeRoy J. Stephens, M.D., 218 Sylvester Ave., St. Louis 63119; graduate of St. Louis University, 1936; member of St. Louis Metropolitan Medical Society; aged 72; died July 16, 1982.

Reynolds L. Emerson, M.D., 116 Jefferson Rd., St. Louis 63119; graduate of Hahnemann Medical College, 1950; member of St. Louis Metropolitan Medical Society; aged 61; died July 20, 1982.

John M. McCaughan, M.D., 4605 Lindell, Apt. 1403, St. Louis 63108; graduate of Washington University, 1926; member of St. Louis Metropolitan Medical Society; aged 82; died July 21, 1982.

Ray S. Hollingsworth, M.D., Clinton 64735; graduate of the University of Kansas, 1928; member of Henry County Medical Society; aged 81; died July 24, 1982.

Alfred W. Eklund, M.D., 405 Cedar St., Pleasant Hill 64080; graduate of University of Minnesota, 1943; member of West Central Medical Society; aged 64, died July 26, 1982.

J. Earl Smith, M.D., 4336 Forest de Ville Dr., St. Louis 63129; graduate of St. Louis University, 1926; member of St. Louis Metropolitan Medical Society; aged 70; died Aug. 5, 1982.

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in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE AMA/GTE Medical Information Network, which will link M.D. subscribers with computerized information bases on clinical subjects, was scheduled for unveiling on September 13. It is being field tested in hospitals, clinics, group practices and solo practices in four major geographic areas of the nation this month. When the system is completed, a physician will be able to connect his or her terminal through an existing telephone line to a bank of computers in the Vienna, Va., office of GTE Corp. An electronic mail, or telemail, feature will allow the user to send a written message to any other subscriber in the United States.

THREE ONE-DAY seminars on improving English pronunciation will be offered by the AMA this fall. The course is designed to help foreign medical graduates improve spoken communications with their patients. So that improvement can be continued after the seminar, a 134-page study guide and nine audio tapes are available. The seminars will be on September 11, New York City; October 16, AMA Headquarters in Chicago; November 6, Miami. Cost of the seminar is $96 for AMA members and $144 for nonmembers. The study guide and tapes are available for $60. For more information, contact Department of Physician Credentials, AMA Headquarters.

MEDICAL SOCIETIES in all states have established programs to attempt early identification and treatment for impaired physicians, AMA President William Y. Rial, M.D., told Congress. These programs may serve as a model for other professions and occupations seeking to deal with members who suffer from alcoholism and other forms of drug dependence, he said. Dr. Rial and LeClair Bissell, M.D., New York City, a member of the AMA Panel on Physician Mortality and the AMA Panel on Alcoholism, told a Senate Labor and Human Resources subcommittee that the medical profession is one of the first professions to confront the fact that some of its members suffered impairments and is the first to take action to deal with the problem. They said physicians who undergo treatment as part of the program have a high recovery rate, from two thirds to three fourths of the participants.

A CORPORATE fund-raising campaign was launched by the AMA Education and Research Foundation for its Patient Medication Instruction (PMI) Program. Estimated first-year costs are $3.7 million. The PMI program will develop and produce patient information material for distribution by physicians at the time drugs are prescribed. The AMA's Division of Drugs is preparing the PMI sheets, which can be used as supplements to oral instructions.

A NATIONAL CONFERENCE on the Utilization of Health Services is scheduled for September 30-October 1 in Chicago. Richard Schweiker, Secretary of Health and Human Services, will give the keynote address at the conference cosponsored by the AMA, the American Hospital Association and the Blue Cross and Blue Shield Association. The conference is designed to provide a forum for discussion of policy issues, an exchange of technical information and an opportunity for participants to learn of local utilization activities. Details are available from Department of Health Care Financing and Organization, AMA Headquarters.

"**HOW WELL ARE YOU** Minding Your Business?" lists books, pamphlets and cassette training tapes that can help physicians and office personnel organize the business side of medical practice — solo, group or partnership. For a copy write Department of Practice Management, AMA Headquarters.

MEDICAL SOCIETIES sponsoring professional liability companies have been urged by the House of Delegates to include AMACO, the AMA's wholly owned medical liability insurance company, in their reinsurance programs. A Board of Trustees report pointed out that although the company has assets of $25.8 million and writes $6 million a year in reinsurance, only 14 of the 27 physician-owned companies use AMACO. Increased support would assure a source of reinsurance in the event commercial companies again abandon the market, the Board noted.

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1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

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Missouri Medicine

Vol. 79, No. 10 (ISSN 0026-6620) October, 1982

University of Missouri-Kansas City School of Medicine

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NEWS NEWS NEWS NEWS Round Up
October, 1982

AMA delegates nominated to committees, councils

Last month two AMA delegates and one alternate delegate were nominated to serve on AMA committees and councils. Action took place at the MSMA Council meeting, September 11 in Jefferson City.

Dr. George Bohigian was nominated to the AMA Council on Scientific Affairs. Nominated to the AMA Council on Legislation was Dr. Marvin Singleton.

Dr. Francis X. Lieb was nominated for appointment to the AMA Ad Hoc Committee on Medicolegal Problems. If Dr. Lieb is not appointed to that committee, he will also be nominated to run for the AMA Council on Medical Services.

In addition, the Council approved a recommendation which calls for MSMA to become more involved with Missouri's Professional Standards Review Organizations. An Ad Hoc Committee will review ways in which MSMA can strengthen its ties with the five existing PSROs.

In other actions, the Council:

* Announced that the next "Establishing Yourself in Medical Practice" seminar will be held April 28-29, 1983 at the St. Louis Airport Marriott.

* Voted to purchase a filmstrip projector. This projector will show MSMA television public service announcements at the next Annual Convention, March 17-20 at Lake of the Ozarks.

* Announced that Missouri currently has 5,071 AMA members.

* Agreed to have the next Council meeting December 10-11 in Columbia.

Physicians to review community health centers

Missouri's 12 community health centers are being evaluated by a group of MSMA physicians. The Committee to Review and Comment on Missouri Community Health Centers is soliciting comments from physicians who have a community health center in their area.

The committee, which was formed early this year, will complete their evaluation in the spring of 1983. The committee's final report will be presented to the Community Health Center Authority, a federal office within the Health and Human Services Dept.

To submit comments or to obtain more information, contact Doug Viehland at MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

Ritter named to Commission

Hubert Ritter, M.D., St. Louis, was recently named to the Joint Commission on Accreditation of Hospitals. Dr. Ritter, who will represent the American Medical Association, will serve a three-year term beginning January 1983.

In June, Dr. Ritter, an obstetrician-gynecologist, was elected to his third term on the AMA's Board of Trustees.

Dr. Ritter is a former president of the St. Louis Medical Society and a former vice president of MSMA.

On Sept. 1, 1982, Governor Christopher Bond (right) signed a proclamation making September Preschool Immunization Month. The Governor presented the proclamation to John I. Matthews, M.D., president of MSMA.

Average American spent $1,225 on health care in '81

Last year, nearly 10 cents of every U.S. dollar was spent on health care. In 1981, Americans generated a record national medical bill of $287 billion.

According to the Health Care Financing Administration, healthcare spending increased 15.1%, consuming 9.8% of the gross national product, which itself rose by 11.4%.

Last year, Americans spent an average of $1,225 on health care.

More than two-thirds of all spending for personal health care services was done by third parties, including private health insurers, governments, philanthropies, and industries. The sum included 89% of hospital care services, 62% of physicians services, and 41% of other spending. Patients paid $82 billion directly.

The Medicare and Medicaid program accounted for 29% of the total, costing $73 billion, according to the report.

Private insurance paid $67 billion in benefits last year, or 26.2% of personal health expenditures. Insurance companies took in $73 billion in premiums or 47% of consumer health spending.

AMA to offer medical data via computer system

As of October 1, the American Medical Association in cooperation with the GTE Corp. now electronically transmits medical information nationwide.

The GTE Telenet Medical Information Network instantly transmits clinical and socioeconomic information to physicians and other health care professionals in Chicago, Washingon, D.C., Los Angeles and Houston.

"In recent decades the tremendous growth of new medical knowledge and techniques has sorely tried the ability of physicians to stay up to date," says James H. Sammons, M.D., executive vice president of the AMA. The creation of AMA/NET, designed to keep up with today's exponential of medical information, was a logical and inevitable step for the AMA, he says.

The network will initially have four medical data bases, plus an electronic mail system for messages between subscribers and bulletin boards on continuing education, medical meetings and warnings on adverse drug reactions.

The data bases will have information on drugs, diseases, medical terminology and bibliographical references to nonclinical articles. The information will come from such AMA publications as the "The Journal of the American Medical Association," "Drug Evaluation," "Current Medical Information and Terminology" and "Physicians' Current Procedural Terminology."

A wide variety of computer terminals — either video display tubes or hard-copy printers — will link subscribers with the network's data banks in Vienna, Va. Connections can be made through existing telephone lines and, in most cases, the physician need only dial a local telephone number for access to the network.

The initial subscription fee is $100. In addition, AMA/NET information services will cost $25 to $27 per hour, depending on the data base used. MED/MAIL will cost $7 to $16 per hour, depending on the time of day the service is used.

The AMA is researching many possibilities for future data bases. Planned for addition to AMA/NET in the next few years are: Drug Alerts, Laboratory Data, Poison Control Information, Therapy Information and Clinical Literature Index and Abstracts.

Members can save 14% on IBM typewriters

IBM Corp. is now offering MSMA members a special discount on IBM electronic typewriters. If the association receives 50 or more typewriter orders, each member will receive a 14% discount on each ordered typewriter.

There are three typewriter models being offered. Listed are the typewriters and reduced prices being offered to MSMA members: IBM Correcting Selectric III — Model 6705 with a 15.5 inch carriage, $890 (retail price — $1,035); IBM Model 75 Electronic Typewriter with 10 page storage capacity, $1,677 (retail price — $1,950); and IBM Selectric III Model 6701, single pitch 13.5 inch carriage without correcting feature, $725.34 (retail price — $843). The quoted prices do not include sales tax.

To receive your discount, you must place your order through MSMA. Your typewriter will be shipped from IBM directly to you.

If you are interested in one or more typewriters for your home or office, mail the attached coupon to MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Yes, I would like to receive a 14% discount on an IBM electronic typewriter. Please order ______________ for me.

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Street ______________

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Telephone ______________

Avis offers express service

In addition to regular car rental discounts, Avis Rent A Car now offers a faster service to MSMA members. The service is called Avis Express.

By applying for an Avis "wizard number," MSMA members can avoid waiting lines.

Currently members are eligible for the following Avis discounts:

1. In the continental United States and the District of Columbia, members can save 40% on normal time and mileage rates and 13% on business rates.
2. In Hawaii, members can save 10% on normal time and mileage and designated flat unlimited mileage rates.
3. Internationally, members can save 10% on normal time and mileage rates.

To receive your discount, you must use the MSMA discount number — A/A877100. Be sure to bring this number to the attention of the rental agent.

To receive Avis express service, contact MSMA for an application: MSMA, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

Nominees sought for civic award

The Missouri State Medical Association is seeking nominations for its second annual Citizenship and Community Service Award. The award is designed to honor a civic-minded physician, who has significantly contributed to his/her community's betterment.

Nominations for the award should include a curriculum vitae and a one or two page statement about the nominee's qualifications for the award.

All nominations must be received by January 10, 1983. Submit nominations to MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102.

The award will be presented at the 1983 Annual Convention, March 17-20, at Marriott's Tan-Tar-A at Lake of the Ozarks.

Remember

MSMA's Annual Convention

March 17-20, 1983

at

Marriott's Tan-Tar-A

Lake of the Ozarks

Survey reveals doctors predict physician surplus

The nation will have too many physicians within 10 years, according to a national survey of doctors released recently by the Henry J. Kaiser Family Foundation.

The physicians believe the surplus will bring changes in hours and services but will not lead to reduced physicians' fees, the study reported.

The study, which was based on interviews with 1,814 physicians across the nation, found that 52% of the physicians believe there will be too many doctors in practice nationwide in the next 10 years. Thirty-seven per cent think there will be about the right number and only 6% think there wll be too few physicians in practice. Four per cent were not sure.

Predictions of oversupply in particular specialities vary by field of practice, the study noted.

While 47% of all physicians in the cross section feel there will be too many doctors in their specialty, about three in four ophthomologists and gastroenterologists and approximately three in five dermatologists, hematologists, neurologists, neurosurgeons and orthopedists feel this way.

On the other hand, the study reported, 70% of psychiatrists think there will be too few specialists in their field.

The physicians believe the surplus will have a generally negative effect on doctors but will have at least some positive impact on patients, according to the study, which was conducted by Louis Harris and Associates.

Specifically, 71% of the sample believe "opportunities for physicians to practice the specialities for which they have been trained will be greatly restricted."

Eighty-four per cent agree that "because of an oversupply of physicians, physicians will find it difficult to develop practices in the locations they prefer."

And 77 % agree that "increased competition will lead physicians to change the hours and kinds of services they offer to patients." The change in hours and services will be a change for the better according to 53% of the physicians.

Another positive change the physicians envision is the introduction of physicians' assistants and nurse practitioners to provide diagnostic and therapeutic services to underserved population groups.

"However," the study noted, "in the face of physician oversupply, physicians may become increasingly reluctant to endorse the use of physicians' assistants and nurse practitioners where they appear to be competing with doctors."

According to the American Medical Association, there are currently 467,679 physicians practicing in the United States. Another 64,615 are residents, and 64,195 students are currently enrolled in medical school. The Graduate Medical Education Advisory (GMEA) Committee predicts that the number of physicians practicing in the U.S. by 1992 will be 535,750.

The study noted that the GMEA Committee agreed with the doctors in the survey that there would be a surplus of physicians in the coming decade.

The Kaiser Family Foundation commissioned the study of physicians and attitudes as they relate to the future and practice of medicine. The research was designed to stand alone and to compliment two previous studies conducted by Louis Harris and Associates for the foundation: *American Attitudes Towards Health Maintenance Organizations (1980)* and *Employers and HMO's (1980).*

For more information on this survey, contact MSMA Headquarters.

PMI program launched

Patient Medication Instruction (PMI) is now being offered by the American Medical Association. Last month, all AMA members should have received introductory PMI information.

The program aims to improve drug therapy by informing patients about the medication physicians prescribe for them. In addition, this process should help strengthen physician/patient relationships, reduce the risk of improper drug use, decrease incidence of preventable and serious adverse drug reactions and increase patient compliance.

Each PMI consists of a 5½ inch by 8½ inch sheet, printed front and back, with information on a particular drug or drug class. Information sheets are available in pads of 100 and can be ordered in quantities of 10 or more. The cost is $.50 per pad which covers postage and handling charges.

For more information on the PMI program contact Barbara Maruszak at (312) 751-6765.

PR Update

This month 151 radio stations around the state will be receiving four public service announcements produced by the MSMA. The PSAs feature mothball poisoning, emergency rooms, carbon monoxide poisoning and hunting accidents.

All MSMA members are encouraged to listen for these tapes on their favorite radio stations and make personal requests for their broadcast. Announcements are distributed quarterly to all Missouri radio stations.

Cost brochures available

"Studies have shown that 60 cents of every health dollar goes to treat tobacco or alcohol related illnesses." That is the type of information your patients will receive in MSMA's brochure, "You and Your Physician — Partners in Reducing Health Care Costs."

Among the tips offered in "You and Your Physician" are suggestions about following your doctor's advice, taking prescribed medications, using emergency rooms only for emergencies and living the kind of lifestyle that is conducive to good health.

You and your physician —
Partners in reducing health care costs

Copies of this brochure are still available. Many physicians have distributed copies to their patients through monthly billing statements and through their waiting rooms.

Quantities of these brochures can be purchased at cost for 10 cents each. To order brochures, send the attached coupon to MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Yes, I would like copies of "You and Your Physician — Partners in Reducing Health Care Costs." Please send ______ copies.

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Check enclosed for ____________________ (10¢ea.)

Medical news in brief

KC physician appointed director of health division

Robert L. Hotchkiss, M.D., has been named director of the Missouri State Division of Health. His appointment becomes effective on November 1, 1982.

Dr. Hotchkiss is a 1970 graduate from the University of Arkansas School of Medicine, Little Rock. He interned at Hillcrest Medical Center in Tulsa, Okla., and did a psychiatry residency at the Arkansas State Hospital.

For the last three years, Dr. Hotchkiss has been deputy director of the Kansas City Department of Health.

He is a member of the Missouri State Medical Association, the Jackson County Medical Society, the Missouri Public Health Association, American Academy of Family Practice and is past president of the Arkansas Public Health Association.

Dr. Hotchkiss will fill a position that has remained vacant since June, when Dr. Mohammad Akhter left the Division of Health.

MOMEDICO releases report

The Missouri Medical Insurance Company (MOMEDICO) recently announced having nearly $9.1 million in assets. Figures for the first six months of 1982 were released in MOMEDICO's Interim Report.

The report shows that MOMEDICO's premium income increased 20% to $1,242,471, investments increased 44% to $409,487, and total revenues increased by 26.3%.

MOMEDICO was established four and one-half years ago by the MSMA and member physicians to provide professional liability insurance. Currently MOMEDICO has 1,400 insureds.

For more information, call toll free 1-800-392-2617.

Association's future examined

At a planning seminar held last summer at Lake of the Ozarks, approximately 30 councilors, officers and members examined plans for MSMA's future.

The follow-up to that meeting will be a second planning seminar, scheduled for late November. At that meeting, a small group of MSMA representatives will refine initial preliminary objectives and will compile a package of goals, which MSMA councilors will vote on during the December 11th Council meeting. If approved, these proposals will be presented to the House of Delegates during the MSMA Annual Convention, March 17-20 at Lake of the Ozarks.

President John I. Matthews, M.D., appointed the following MSMA members as participants in the November seminar: Drs. Matthews, Ronald A. Youmans, B. A. Moranville, Carol F. Williams, James M. Stokes, Walter A. German, Eugene T. Hansbrough, Melvin C. Kasten, Richard V. Bradley, Donald McIntosh, James Hopkins and T. J. Cooper.

Dr. Hansbrough to serve on OSMAP Board

Eugene T. Hansbrough, M.D., was recently elected to the Board of Directors of the Organization of State Medical Association Presidents. Dr. Hansbrough is immediate past president of the Missouri State Medical Association.

The Poplar Bluff surgeon will serve a three-year term on the board.

Two winter tours offered to MSMA members

A 16-day safari adventure to South Africa and an eight day sun-swept holiday to Montego Bay are two trips being offered to MSMA members. The tours are being conducted by INTRAV and feature non-regimented schedules.

The South African adventure, January 21-February 5, 1983, offers travel to Johannesburg, Durban and Cape Town. One of the highlights of the trip will be an excursion on South Africa's Blue Train, the world's most elegant express train. In addition, travelers will see a private game reserve, a gold mine and tribal dances.

In conjunction with this adventure, a Continuing Medical Education Seminar will be conducted for credit in Category II.

The Jamaican adventure leaves St. Louis and Kansas City on February 7 and returns February 13, 1983. This trip features golfing, scuba diving, rafting, swimming and duty-free shopping.

In conjunction with this trip, a Continuing Medical Education Seminar will be conducted for credit in Category I.

For more information on either trip, contact the Missouri State Medical Association, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

MSMA suggests ways to get involved politically

Statistics show that the chances of a legislative bill gaining passage or being defeated are directly related to the amount of interest and effort placed on the issue by influential groups.

Physicians could have the dominant voice in legislative issues if sufficient numbers would adopt the "3-C Rule" — Campaigns, Contributions and Contact.

Campaigns: Politicians are vitally interested in being elected or re-elected. Nothing is more appreciated than volunteer workers to assist in their campaigns. Discuss the issues with the candidates, select your favorite and get involved.

Contributions: Running an effective campaign in today's "media world" requires money — and that means personal contributions are vital. Realize this fact-of-life, write a check to your candidate and reap a tax write-off along with a new friendship.

Contact: Once you have established a relationship with your elected officials, stay in contact with them on medical issues. Legislators run the gamet from farmers to housewives to lawyers, etc., and they want physicians' opinions on medical issues. And remember, regardless of your legislator's occupation, he votes on the laws that govern your profession.

Another way to get involved is through the Missouri Medical Political Action Committee. MMPAC is a voluntary bipartisan committee which reviews the candidates and financially supports those whose views most closely coincide with the medical profession. Membership is $40.

Your involvement is needed now, before the elections. If you are willing to devote just a small portion of your time and efforts toward insuring better laws for your patients and your profession, please contact MSMA, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health issues of the 80's

competition

The word ''competition'' applied to the health care delivery system may be perceived as an anathema by some physicians who, in the past, have equated the concept of competition with high-pressure, wheeler-dealer business rivals. Or competition might have evoked thoughts of Olympic contestants, honorable orators, or chess champions. But the phrase, ''competition in the medical care marketplace,'' until recently, was not often used.

Today, competition forms the cornerstone of some legislative and administrative proposals aimed at reducing health care utilization and, consequently, reducing costs. The premise, like many economic concepts, seems simple: if patients (the consumers) have greater participation in choosing from among several health care plans with different costs and different benefits, they will select appropriate plans and use services more prudently. Included in the premise is the idea that those connected with providing and financing care— physicians, hospitals, insurers and others — will compete to find the most cost-effective ways of providing that care. The extent to which actual behaviors will change to meet predictions is unknown.

The American Medical Association supports many of the principles of competition proposals — but we have grave concerns about some aspects of certain proposals.

About a year ago, the AMA House of Delegates adopted a report containing principles of evaluating competition legislation. The report named six basic desirable concepts: employers should offer multiple choice of plans; plans should provide at least certain minimum benefits; equal employer contributions, regardless of plan, should be required; nontaxable rebates to employees should be made when plans costing less than the amount of the employer contribution are selected; a maximum nontaxable contribution limit (adjustable for inflation) should be placed on the amount(s) of the premiums paid by an employer that are eligible for tax deductions as business expense; and unqualified plans should not be eligible for tax deduction.

The foregoing concepts are basic to the competition proposals now being considered by Congress and the Administration. However, some legislative initiatives before the Congress also go far beyond these and could create an adverse effect on our health delivery system. The AMA opposes any legislation that would: (1) increase federal involvement in regulation of health care delivery; (2) merely replace existing programs of regulation with yet another set of expensive and complicated dictates; or (3) require undesirable restructuring of our health system. The AMA believes, also, that any new program should be introduced on a limited basis until it has been tested and proved effective.

While many economic theories appear reasonable on paper, human behavior does not always mirror theory. Results may not match expectations. Radical changes in health care delivery should be avoided, as should any proposals that would serve to ration or lower the quality of health care available to the American people.

The American Medical Association, reflecting the concern of its members, will continue to maintain a careful watch on legislative proposals affecting health care and support only those that show the promise of practicality.

Such leadership requires your support. The larger our membership (now nearly 240,000) the greater our influence, and our strength, as the only representative for all of medicine.

For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196.

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

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All material other than scientific should be received prior to the first of the month preceding month of publication.

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HYPERTENSION:

METHYLDOPA?
RESERPINE?
INDERAL? COUNTLESS THOUSANDS WOULD BE BETTER OFF WITH

INDERAL®
(PROPRANOLOL HCl) **B.I.D.**
The sooner, the better.

Today, INDERAL—instead of methyldopa, instead of reserpine.

INDERAL exhibits few of the disturbing side effects of methyldopa and reserpine. Sedation, depression, and impotence are rare.* Tolerance is not likely to occur, as it frequently does with methyldopa. For the vast majority of patients—INDERAL means a step toward improving the quality of life. (INDERAL should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.)*

INDERAL blocks beta-receptor sites *in the heart* to reduce heart rate and cardiac output—reducing cardiac work load—sparing an overburdened heart.

Hypertensive hearts can rest easy with INDERAL. For many—it is ideal, first-step therapy.

INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

*Please see following page for Brief Summary of Prescribing Information.

THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

INDERAL®

(PROPRANOLOL HCl)

B.I.D. FOR HYPERTENSION

NEW TABLET SHAPE I™

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)
Inderal® (propranolol hydrochloride)

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block 4) cardiogenic shock 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase lactate dehydrogenase

HOW SUPPLIED

TABLETS

—Each hexagonal-shaped, orange scored tablet is embossed with an "I" and imprinted with "INDERAL 10," contains 10 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0421-81) and 1,000 (NDC 0046-0421-91) Also in unit dose package of 100 (NDC 0046-0421-99)

Each hexagonal-shaped, blue, scored tablet is embossed with an "I" and imprinted with "INDERAL 20," contains 20 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0422-81) and 1,000 (NDC 0046-0422-91) Also in unit dose package of 100 (NDC 0046-0422-99)

—Each hexagonal-shaped, green, scored tablet is embossed with an "I" and imprinted with "INDERAL 40," contains 40 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0424-81) and 1,000 (NDC 0046-0424-91) Also in unit dose package of 100 (NDC 0046-0424-99)

—Each hexagonal-shaped, yellow, scored tablet is embossed with an "I" and imprinted with "INDERAL 80," contains 80 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0428-81) and 1,000 (NDC 0046-0428-91) Also in unit dose package of 100 (NDC 0046-0428-99)

The appearance of these tablets is a trademark of Ayerst Laboratories

Store at room temperature (approximately 25° C)

INJECTABLE

—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10 (NDC 0046-3265-10)

Store at room temperature (approximately 25° C)

7997/882

Reference: 1 Freis, E D Hypertension (Suppl II) *3* 230 (Nov-Dec) 1981

Ayerst® AYERST LABORATORIES
New York, N Y 10017

Editor's Corner

The desire for more education struck the editor recently as he looked over the brochure for a medical meeting being held just a block from the World's Fair in Knoxville. So, 12 useless-in-Missouri CME credits were picked up, some knowledge was hopefully obtained and the Fair was just "fair."

One interesting observation was made several miles from the Exposition. At a busy intersection in west Knoxville stood a one-story business building with a generous parking lot in front. The lot was full of cars that day; atop the building was a simple but direct sign with letters ten-feet tall: BACK PAIN CLINIC.

Overt advertising such as this goes against the grain for most physicians, but it is part of the trend toward self-promotion which is in the medical picture today. One thinks back of the good old country "doc" with the shingle in front of his office being his only promotion. On the other hand, that sign probably represented as large a piece of advertising as many of the merchants of that day utilized. Most of us have some suspicions as to the abilities and credentials of the operators of the "Pain Clinic," but the approach was direct, and it said to the public, "We are here to care for your backache."

This has to be compared to what a lay person faces if an attempt is made to seek mainline medical help. The Yellow Pages are comprised of confusing lists of specialists and subspecialists, with limited visiting hours and often a further notation "By Appointment Only." (Attempts to make an appointment with an icy-voiced receptionist can also be an unrewarding experience, but that's another subject.) ORTHOPEDICS, OPHTHALMOLOGY and OTORHINOLARYNGOLOGY look good on diplomas, but for the average person there is a language barrier between him and help for his backache, burning eyes or sore throat.

The recent court rulings concerning professional advertising do seem to present a problem but, also, a challenge. The problem comes from the practical fact, totally overlooked by the Supreme Court theorists, that the purveyors of questionable treatment modalities and marginal operators in general are the ones who tend to do the most advertising and who generally tend to give the least meaningful and often the most expensive treatments. On the other hand, perhaps physicians in general can now be of more help to the public in better stating what they have to offer. The rheumatologist can surely let it be known that he treats something besides grandma's rheumatism. The difference between Nephrology, Neurology and Urology isn't as well understood by the public as we might think. The Psychiatrist can let us all know whatever it is he does.

The newer streetside Emergency Medical Centers ("Kentucky Fried Medicine" to some) are now advertising their services in no uncertain terms and are doing quite well. The most unmentionable aspect of the entire subject — publicizing fee schedules — is probably fast approaching.

All the above rambling discussion really concerns communication between the doctor and the patient — and the need to better let the public know what is available, who is qualified to do it and, also, what it would cost. We need to accept advertising as a fact of life, be it via letterheads, yellow pages, newspaper ads or painted signs. We need to set guidelines to protect the public and not be afraid to counter misleading advertising with the truth. All this may well raise some physicians' blood pressures, but it is now part of the practice of medicine.

Jordan W. Burkey, M.D.

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30	130	258	495	890
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40	171	355	660	1,245
45	223	473	895	1,625
50	302	638	1,225	2,055
55	436	978	1,905	3,075
60	707	1,655	3,260	5,275

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INSOMNIA

Others to look for:

agitation
anorexia
feelings of guilt and worthlessness
fatigue
palpitations
headache
vague aches and pains
sadness
psychic and somatic anxiety

Artist's conception,
looking out from the human eye
as conceived in a schematic model.

ROCHE

LIMBITROL GIVEN H.S.: ONE OF THE VITAL SPECIFICS OF TREATMENT

Limbitrol brings a special—and specific—quality of relief to most anxious depressed patients. Insomnia, for example, responds with particular promptness. Other symptoms likely to respond within the first week of treatment include anorexia, agitation and psychic and somatic anxiety. And, as the depression and anxiety are alleviated, in many cases so are such related somatic symptoms as headache, palpitations, and various vague aches and pains.

Limbitrol given once daily h.s. may be the best approach

Many patients respond readily to a single bedtime dose of Limbitrol, a convenient schedule that may enhance compliance and helps relieve the insomnia associated with anxious depression. Limbitrol also offers a choice of other regimens: t.i.d., or a divided dose with the larger portion h.s. In all cases, caution patients about the combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as driving or operating machinery.

in moderate depression and anxiety

Limbitrol® Ⓒ IV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

Specific therapy with h.s. dosage convenience

Please see summary of complete product information on following page.

LIMBITROL® TABLETS Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required.
Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

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Manati, Puerto Rico 00701

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Ad Council

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ALL FOR ONE
ONE FOR ALL

© Janssen Pharmaceutica Inc 1982 JPI-282

Alexandre Dumas'
The Three Musketeers
and D'Artagnan

ONE FOR ALL – One tablet treats pinworm in any patient, regardless of age or body weight.* Obviates need to calculate individual dosages.

A single tablet eradicates pinworm in 95% of patients.

*Contraindicated in pregnant women and in persons who have shown hypersensitivity to the drug.

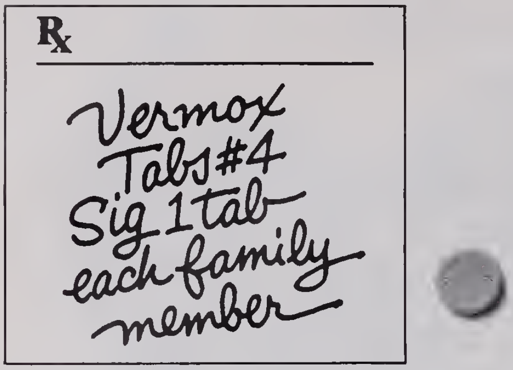
VERMOX® CHEWABLE TABLETS
(mebendazole)

JANSSEN
PHARMACEUTICA

The #1 anthelmintic for pinworms and many other worm infestations

Please see complete Prescribing Information on adjacent page.

VERMOX® CHEWABLE TABLETS (mebendazole)



DESCRIPTION VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

ACTIONS VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival. In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 μg/ml and 0.09 μg/ml, respectively.

INDICATIONS VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (common roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies as a function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains. Efficacy rates derived from various studies are shown in the table below:

	Whipworm	Common Roundworm	Hookworm	Pinworm
cure rates				
mean	68%	98%	96%	95%
(range)	(61-75%)	(91-100%)	—	(90-100%)
egg reduction				
mean	93%	99.7%	99.9%	—
(range)	(70-99%)	(99.5%-100%)	—	—

CONTRAINDICATIONS VERMOX is contraindicated in pregnant women (see Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

PRECAUTIONS *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.
PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

ADVERSE REACTIONS Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

DOSAGE AND ADMINISTRATION The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food. For the control of pinworm (enterobiasis), a single tablet is administered orally, one time. For the control of common roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days. If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

HOW SUPPLIED VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.
VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium.

US Patent 3,657,267
December 1979

Committed to research...
because so much remains to be done.

Tableted by Janssen Pharmaceutica, Beerse, Belgium for

JANSSEN
PHARMACEUTICA
New Brunswick, New Jersey 08903

JPI-282

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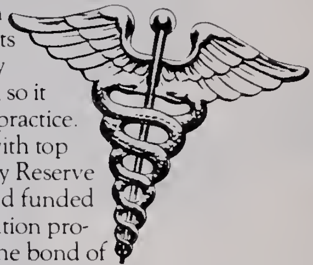

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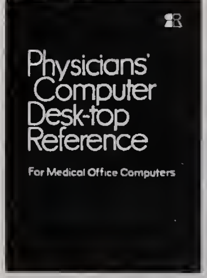

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ad·dic·tion

/ a'dik-shen / 1. Compulsive physiological need for alcohol. 2. In preliminary examinations, could be diagnosed as nervous condition. 3. Arrested through effective alcoholism treatment.

Chances are, during a patient's preliminary examination, alcoholism is not one of your immediate suspicions. But with 10 million Americans suffering from this disease, and over 100,000 in the Kansas City area alone, perhaps it should be. Or perhaps the drinking problem is someone within your patient's family, causing them mental and even physical abuse.

At Bethany Medical Center's Alcoholism Rehabilitation Department (ARD), our professional counselors offer both in- and outpatient programs for individuals suffering from alcoholism.

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University of Missouri-Kansas City School of Medicine

Achievements of the First Decade

by

HARRY S. JONAS, M.D., *Dean*

A DECADE of an alternate approach to undergraduate medical education in the United States is now history at the University of Missouri-Kansas City School of Medicine (UMKC). The state of Missouri and the University of Missouri can take pride in the accomplishments of this state-supported second medical school that also has as its primary mission the training of competent physicians to serve the people of Missouri.

History

Kansas City, the second largest metropolitan area in the state, has long been known for its outstanding medical facilities and personnel that have served as a major training resource in the field of health care. Outstanding postgraduate residency training programs at Kansas City General Hospital, Children's Mercy Hospital, Western Missouri Mental Health Center, St. Luke's Hospital and Menorah Medical Center were in existence prior to the advent of the Missouri University Medical School in Kansas City. These programs trained numerous physicians who remained in the state and region to practice medicine.

The first crucial action in paving the way for an academic health center in Kansas City was the expansion of the University of Missouri into a four-campus system by adding the Rolla, St. Louis and Kansas City campuses to the existing Columbia campus. The nucleus for the University of Missouri-Kansas City was a fine, private liberal arts institution — Kansas City University, with an existing faculty and campus. Added to this institution were three existing professional schools — Kansas City College of Dentistry, Kansas City School of Law and Kansas City College of Pharmacy. This created an institution heavily committed to professional-level education.

The University of Missouri assigned primary missions to each of its four campuses. The three primary missions assigned to UMKC were health sciences, urban affairs and performing arts.

The next major step in preparing for the new medical school in Kansas City was to shift the operation of the Kansas City General Hospital from city-based political control to a citizen board of directors, thus creating a more flexible and independent administrative structure. The hospital board has been fortunate in having outstanding leadership from the community. For example, Mr. Nathan Stark, who served as president and chairman of the Board, went on from Kansas City to national prominence in the health care field serving as Undersecretary of the U. S. Department of Health and Human Services.

When the time came to develop plans for a medical school in Kansas City, the University of Missouri also was fortunate in securing Dr.

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E. Grey Dimond as the provost for the health sciences. Dr. Dimond agreed to accept this important role with the understanding that a nontraditional approach to medical education could be developed. The University agreed,and Dr. Dimond's planning efforts resulted in a combined baccalaureate and medical degree program that admitted students directly from high school.[1] The curriculum fully integrates the teaching of liberal arts and humanities, basic science and clinical medicine throughout a six-year, year-around schedule. Students receive one month per year in vacation, so that the total time in the curriculum is as long as or longer than that of the traditional four years of college or university plus four years of medical school with the usual summer vacations. The total curriculum of 276 weeks is not shortened but merely compressed into six calendar years. This allows a graduate of the program two years' lead time after receiving the M.D. degree for engaging in postgraduate residency or fellowship in educational programs.

Students in the program are urged to study for additional years, if they so desire, in order to take a humanities major or to begin an educational program in the basic sciences that may lead to a Masters or Ph.D. degree in the life sciences.

The UMKC Medical School has a number of other unique features — each oriented toward the medical student and their needs. A strong faculty-student relationship is developed through a docent system that assigns full-time faculty members, known as docents, to a group of 12 students. The docent serves as a teacher, role model and counselor to the students during the last four years of the program. Younger-level students are assigned senior partners and, thus, a program of peer support and counseling occurs. The Medical School has placed a strong emphasis on audiovisual and computer-assisted instruction and has developed its own internal testing and evaluation system through the Quarterly Profile Examination that correlates well with student performance of National Board of Medical Examiners examinations required for graduation.

Table 1 presents information concerning UMKC School of Medicine students who were provisionally admitted in 1970 through 1980. This includes the first full graduation class of 1977.

All this has been achieved with a concept that has been cost-effective in today's world of economic constraint, since the cost of education per student at the UMKC School of Medicine has been kept substantially below both the national and regional levels.

Innovative ideas in medical education develop slowly. Just recently, however, the Harvard Medical School announced[2] on its 200th anniversary the launching of a "radical new approach" to medical education utilizing many of the concepts that have been practiced in this Midwestern university for more than a decade. A unique laboratory experiment in medical education at the University of Missouri-Kansas City is no longer an experiment but has now become a reality.

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TABLE 1
UMKC SCHOOL OF MEDICINE GRADUATES

Number and Training Status	
422	Graduates to date
65%	Still in residency training
35%	In practice
Geographic Location	
52%	Of graduates in Missouri or Kansas
71%	Of graduates in Midwest
Choice of Specialty	
70%	Choose "primary care" specialties
UMKC Faculty	
196	Full time
45	Part time
183	Residents
576	Community physician volunteers
UMKC Students	
568	Students
98%	From Missouri
4.5	Applicants for each position (compares with national average of 1.9 to 1)
Further Data on Students	
Mean high school rank — 93rd percentile	
33%	From rural Missouri
41%	Women
16%	Minority
Quality of Graduates	
Study shows UMKC graduates rated as better than graduates from other schools by 72% of residency directors	
80% of graduates receive first or second choice of residency	
National Board examination scores closely in line with national averages	

The Missouri Ear, Nose and Throat Association held its annual Fall meeting on September 25-26 at Tan-Tar-A, Lake of the Ozarks. The scientific program was assembled by Dr. James Wolfe of Springfield and included topics such as surgical procedures of the head and neck, immunology, sleep apnea, laser in pediatric laryngeal problems, audiological problems and Missouri Medicaid as applied to otolaryngology. All lecturers were Missouri residents. The Spring meeting of the Association will be held on March 19, 1983 during the MSMA Annual Convention at the Lodge of the Four Seasons.

LESLIE E. TUCKER, M.D. *and*
ROBERT A. COLLINS, M.D., *Kansas City*

Primary Hereditary Hemochromatosis

Diagnosis and Treatment

Primary hereditary hemochromatosis (IHC) is a serious disease with life-threatening and often irreversible complications. However, by screening relatives of patients known to have the disease and by recognizing that diabetes, asymptomatic hepatomegaly, arthropathy and impotence may precede the development of advanced IHC by years, the physician may occasionally diagnose the disease early and prevent later complications. The following two case reports present a discussion of the disease with particular emphasis on the various modes of presentaion and earlier diagnosis.

Case Reports

Case #1 A 51-year-old white woman had a ten-day history of cold symptoms and shoulder, neck and chest pain. Her past history revealed only essential hypertension. Her family history was unremarkable.

Hyperpigmentation was absent. Results of an examination of the heart and lungs were normal. Circumduction of the right shoulder reproduced her chest, shoulder and neck pain. A large mass that appeared to be the liver extended 14 cm below the right costal margin. It was firm, nontender and nonnodular. Results of the remainder of her examination were normal.

Initial laboratory studies showed normal values except for serum glutamic oxaloacetic transaminase (SGOT) of 47 IU/ml (normal < 80 IU/ml), a serum glutamic pyruvic transaminase (SGPT) of 62 IU/ml (normal < 85 IU/ml), an alkaline phosphatease of 156 IU/ml (normal < 85 IU/ml) and serum iron of 219 mcg/dl (normal 45-160 mcg/dl). Chest x-ray and EKG were normal. A computerized scan of the abdomen showed a large liver with increased attenuation value suggestive of iron deposition disease. Further iron studies showed a percentage transferrin saturation of 95%, total iron binding capacity of 236 mcg/dl (normal 250-350 mcg/dl) and a serum ferritin of 1485 mcg/l (normal in adult female 12-180 mcg/l). Results of a liver biopsy revealed cirrhosis. Hepatocytes were 4+ positive on prussian blue iron stain. Pathological diagnosis was cirrhosis due to hemochromatosis. The patient has since been on weekly phlebotomy therapy. There has been a progressive decrease in liver size and liver functions have returned to normal. Family screening is in progress.

Case #2 A 55-year-old white man was seen because of progressive shortness of breath, dyspnea and intermittent periods of confusion. The patient's disease had been diagnosed a year earlier as diabetes mellitus. He had been impotent for the previous five years. He had had attacks of pseudogout involving the right knee. Radiographs of the knees had shown chondrocalcinosis several years previously.

On examination, the patient was dyspneic. The skin was diffusely hyperpigmented. Jugular venous distention was evident to the angle of the mandible with a positive hepatojugular reflex. Bibasilar rales were present in the lungs. The apical impulse of the heart was diffuse and displaced. A third heart sound was present. There was moderate pretibial edema. The liver was enlarged and palpated to 14 cm. Atrophic testes were palpable. Hypertropic changes over the metacarpophalangeal and proximal interphalangeal joints were present.

Laboratory test values were normal except for an SGOT of 188 IU/ml and blood glucose of 280 mg/dl (normal < 110 mg/dl). An electrocardiogram (EKG) revealed low voltage and atrial fibrillation. Chest x-ray showed cardiomegaly and redistribution of pulmonary vasculature. Hemochromatosis with congestive cardiomyopathy was considered. Iron studies revealed a serum iron level of 128 mcg/dl, percent transferrin saturation of 99% and a serum ferritin level of 1200 mcg/l. Despite therapy, the patient died of refractory congestive heart failure.

Definition of IHC

IHC is a disorder characterized by excessive iron deposition in the parenchymal cells of various organs, expecially the liver, pancreas and heart. Iron also is found in the pituitary, thyroid, adrenals, synovial cells and skin. The iron is accumulated gradually. Over decades, it leads to fibrosis and impaired function. The basic defect is thought to result from an increased active gut absorption of iron that is inappropriately high for the degree of total body iron stores.[1] IHC appears to be inherited in an autosomal recessive fashion with the gene being located on chromosome six. Patients who are homozygous appear to absorb iron excessively throughout life, develop excessive iron stores of between 10 gm and 40 gm (normal < 5 grams) and clinical disease develops. Heterozygotes may absorb iron excessively but accumulate only a minor degree of iron overload, usually only 5 gm to 6 gms, and do not develop clinical disease.[2]

Clinical Manifestations of IHC

Usually, patients with IHC have far advanced disease. Classically, they are seen with the triad of cirrhosis, diabetes and hyperpigmentation. Most patients will have hepatomegaly. Even in the presence of marked fibrosis, however, results of liver function tests are often normal or only slightly elevated. Hepatoma develops in about 30% of those with established cirrhosis. Skin hyperpigmentation, largely due to melanin deposition, also occurs in most patients. It is usually generalized but may be more prominent in sun-exposed areas. In more than half of the patients, it is mild enough to be easily overlooked. Diabetes occurs in more than 50% of patients and appears to be due not only to iron deposition but also genetic factors. Loss of libido, impotence and testicular atrophy occur in about half of the patients and probably results from selective hypothalamic pituitary failure.

Arthropathy develops in about 25% to 50% of patients. It typically involves the proximal interphalangeal joints, metacarpophalangeal joints, wrists, hips and knees. The distribution of arthritis resembles rheumatoid arthritis, but the deformities are more typical of degenerative disease. Acute attacks of calcium pyrophosphate induced pseudogout, especially involving the knees, also may develop in patients. Chrondrocalcinosis may be present on radiographs.

Cardiac involvement occurs in about 33% of patients. Patients usually have a congestive cardiomyopathy but rarely a restrictive cardiomyopathy or arrythmias.

Occasionally, patients may have central nervous system manifestations ranging from apathy, poor memory and lack of concentration to frank stupor. This dysfunction does not relate to typical hepatic encephalopathy and often improves with concomitant control of diabetes, heart failure or phlebotomy.[3, 4]

Early Detection of IHC

Early diagnosis could result in effective therapy prior to the development of cirrhosis, hepatoma and cardiac problems. In one study of 34 patients, the initial symptoms that led to diagnosis were predominantly the finding of asymptomatic hepatomegaly, diabetes, obscure abdominal pain, impotence and arthritis.[4] In some of of these patients, these symptoms had been present for years prior to the diagnosis of IHC. Clearly, a high index of suspicion must be maintained for such patients. IHC also should be considered in all cases of unexplained cardiomyopathy.

Once an index case if sound, screening of family members will also result in detection of asymptomatic homozygous carriers for the HLA genotype for IHC.

Laboratory Diagnosis of IHC

All patients suspected of IHC should have a screening battery consisting of the serum iron, percentage transferrin saturation and serum ferritin. The serum iron will be increased in approximately 75% of patients. Transferrin is the protein which carries iron in blood and is usually saturated more than 80% in homozygous carriers of IHC. Ferritin is a storage protein for iron and closely correlates with total body iron stores. However, it may also be elevated in inflammatory states, in malignancy such as leukemia and due to other causes of hepatocellular necrosis such as hepatitis. Occasionally, patients, particularly women, will have a normal serum ferritin level despite markedly increased iron stores.[2, 5, 6] This again stresses the need for all three tests of iron overload. If one or more tests are abnormal, a liver biopsy with histochemical staining for iron and measurement of iron concentration should be done.

Screening Relatives of IHC

All first-degree relatives over ten years of age should be screened for iron overload. Even if results of these tests are normal, serial investigations over years are required. In certain instances, HLA typing may even be indicated to identify sibling risk. Approximately 25% of heter-

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The two cases of primary hereditary hemochromatosis described in this article illustrate important points about this disease and emphasize the various modes of presentation and early diagnosis. Screening of asymptomatic family members also will result in the early detection of this disease.

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ozygotes have abnormal screening iron studies, but clinical disease does not develop.[2]

TREATMENT OF IHC

Phlebotomy remains the mainstay of therapy. Removal of 500 ml of blood weekly results in removal of 250 mg of iron. Since patients with IHC have a iron load of from 10 gm to 40 gm, phlebotomy need be continued over a period of one to four years. Depletion of iron stores is assumed when anemia develops in the patients with a hemoglobin level of < 11 gm and a serum ferritin value of ≤ 10 mcg/l. Subsequently, phlebotomy needs to be done throughout life, usually every three to four months.

BENEFITS OF PHLEBOTOMY

Removal of iron results in significant therapeutic gain.[6, 7, 8] Five-year survival is increased. Cardiomyopathy may be completely reversed.[9] Skin pigmentation will decrease. The liver size decreases and liver functions often return to normal. Lack of progression of liver disease results in fewer deaths from encephalopathy and variceal bleeding. Insulin requirements may be lowered. Central nervous system dysfunction may improve. Unfortunately, impotence, testcular atrophy and arthropathy are not reversible. Although hepatic fibrosis may be decreased, cirrhosis is irreversible. Furthermore, it appears that even successfully treated patients have a 30% chance of developing hepatoma. To date, however, no hepatomas have occurred in patients treated early in the precirrhotic stage.

SUMMARY

The two cases described here illustrate important points about IHC. First, at the time of diagnosis, the severity of clinical manifestations may vary widely between patients. In the first case, a woman was seen with relatively innocuous complaints and hepatomegaly was found incidentally on examination. The second patient, on the other hand, had multisystem involvement with hyperpigmentation, hepatomegaly, diabetes, arthropathy, testicular atrophy and cardiomyopathy. Secondly, to screen for IHC, the serum iron value is by no means sufficient. In case two, the serum iron value was normal, but the transferrin saturation and ferritin levels were sufficiently elevated. Thirdly, these two cases illustrate the desirability of early diagnosis. The condition of the second patient presumably could have been diagnosed years earlier, but it was not until his disease had progressed to irreversible cardiogenic shock. In contrast, the condition of the first patient was fortunately diagnosed earlier and seems to be responding to therapy. Screening of asymptomatic family members also will result in early detection of patients with IHC.

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Pendulum Freedom

"We are living, I think, in the excesses of freedom. Just take a look at 42nd Street and Broadway. I think we'll begin to get a puritan reaction by the time I die. And when puritanism is carried to excess, there'll be another outburst of freedom. That's the way history goes. We are incapable of moderation."

— WILL DURANT, on his 94th birthday.

STEVE MILLER *and*
STEPHEN HAMBURGER, M.D., *Kansas City*

Syndrome of Inappropriate Secretion of Antidiuretic Hormone

The syndrome of inappropriate secretion of antidiuretic hormone (SIADH) is a clinical disorder that is being recognized with increasing frequency. In this article, the authors review the clinical and biochemical manifestations of this illness and discuss the acute and chronic treatment.

Mr. Miller is a medical student and Dr. Hamburger is Associate Professor of Medicine, University of Missouri-Kansas City School of Medicine.

IN 1957, Schwartz and associates first described the syndrome of inappropriate secretion of antidiuretic hormone (SIADH) in two patients with bronchogenic carcinoma.[1] Since then, SIADH has been recognized with increasing frequency.[2, 3] Clinical and laboratory features include (1) hyponatremia and hypoosmolality of extracellular fluid and serum, (2) absence of intravascular volume depletion or generalized edema, (3) inappropriately high urine osmolality for concomitant plasma tonicity, (4) inappropriately high renal excretion of sodium, (5) normal adrenal function and (6) normal renal function.[1]

PATHOPHYSIOLOGY[4, 5]

Antidiuretic hormone (ADH) or vasopressin is produced in the supraoptic nucleus of the hypothalamus and is stored in the posterior lobe of the pituitary gland. It acts to maintain plasma osmolality and extracellular fluid volume by increasing the permeability of collecting ducts to solute-free water. The normal secretion of ADH is controlled by three negative feedback loops. The first and most important is plasma tonicity. Changing plasma osmolality by only 2% from normal may initiate a full antidiuresis or diuresis. ADH secretion increases with hypertonicity and decreases with hypoosmolarity. The second influence is circulating blood volume as detected by stretch receptors located in the left atrium. As the left atrium is distended, ADH release is inhibited. The final feedback loop is blood pressure. Carotid sinus and aortic arch baroreceptors stimulate ADH secretion when blood pressure decreases. Other factors that influence the release of ADH include pain, stress, emotion and drugs. In SIADH, the negative feedback system that regulates ADH secretion fails. The result is increased reabsorption of water with dilution of body fluids.

Hyponatremia is initially caused by dilution due to excess water retention. In addition, a clinically undetectable increase in urinary sodium excretion potentiates the hyponatremic state. Expansion of the extracellular fluid space results in greater glomerular filtration and suppression of proximal tubular reabsorption of sodium. There also is a reflex hypoaldosteronism secondary to the increased vascular volume that may contribute to renal salt loss. More recent studies suggest that prostaglandin E_2 also may play a role. The patient will usually develop a new, steady-state concentration of plasma and urinary sodium. At this time, urinary excretion of sodium will reflect sodium intake and may occasionally be low, although the kidneys continue to be unable to retain sodium as a salt load will quickly be excreted.

ETIOLOGY[2, 3]

A wide variety of clinical disorders and drugs have been associated with SIADH (Table 1). The most frequent cause is malignancy, which represented 67% of all cases in a recent review. Malignant cells from patients with SIADH have been shown to synthesize, store and release ADH which is identical to native ADH. The most commonly encountered tumors are lung carcinomas, usually of the oat cell or small cell types. Other malignancies that have been reported to be associated with SIADH include Hodgkin's disease, reticulum cell sarcoma, thymoma, and carcinoma of the pancreas and duodenum. Undoubtedly, the list will continue to expand as

TABLE 1

Malignancy
Carcinoma of lung
Hodgkin's Disease
Reticulum cell sarcoma
Thymoma
Carcinoma of the pancreas
Carcinoma of the duodenum
Pulmonary
Tuberculosis
Pneumonia
Abscess
Asthma
Mechanical ventilation
Postmitral commissurotomy syndrome
Central Nervous System
Meningitis
Herpes encephalitis
Brain tumors
Aneurysm
Guillain-Barre Syndrome
Malformation
Subarachnoid hemorrhage
Metabolic and Endocrine
Hypothyroidism
Addison Disease
Porphyria
Hypopituitarism

more widespread techniques for ADH bioassays become available.

Many nonmalignant intrathoracic processes including tuberculosis, pneumonia, abscess, aspergillosis, asthma and mechanical ventilation also have been implicated in SIADH. Excess ADH release also has been seen in the postmitral commissurotomy syndrome. Relaxation of the left atrial wall due to decrease filling has been suggested as the mechanism.

Central nervous system (CNS) disorders represent another wide spectrum in which this syndrome has been reported. Since many symptoms of SIADH are similar to these disorders, the diagnosis is sometimes overlooked. Reported CNS problems causing SIADH include meningitis, herpes encephalitis, brain tumors, head trauma, aneurysm, Guillain-Barre's syndrome and others. The likely explanation in these illnesses is sustained ADH production in the neurohypophysial system.

Metabolic and endocrine disorders also can cause inappropriate ADH secretion. Hypothyroidism, Addison's disease, porphyria and hypopituitarism have all been implicated.

The list of drugs that can induce SIADH is extensive and continues to expand (Table 2). In a review by Moses *et al*, 10% of all cases of SIADH were drug induced.

Oral Hypoglycemic Agents.[6] Chlorpropamide is the oral hypoglycemic agent most frequently associated with SIADH. In fact, hyponatremia suggesting excess ADH effect may develop in up to 4% of all patients receiving chlorpropamide. It appears that the drug stimulates ADH release and enhances its action at the level of the collecting ducts. Other hypoglycemic agents implicated include rare cases associated with tolbutamide, phenformin and metformin.

Antineoplastic Agents.[7, 8] Both vincristine and cyclophosphamide can produce SIADH by causing release of ADH from the neurohypophysis. Water retention in these patients is further aggravated by the large fluid intake prescribed to prevent uric acid stones and cystitis associated with these drugs.

Diuretics.[9] The majority of patients with SIADH related to diuretics have been those taking thiazides. The severe potassium loss seen with these drugs may stimulate the volume receptors that result in high levels of ADH release and accounts for the impaired water excretion and hyponatremia.

Tranquilizers.[10] Under this heading is a heterogeneous group of drugs that may cause SIADH. Included are the antidepressants, amitriptyline and isocarboxazid; the antipsychotics, thioridazine, fluphenazine, and thiothixene; and the anticonvulsant, carbamazepine.

Oxytocin.[11] SIADH in relation to oxytocin use

TABLE 2

Oral Hypoglycemic Agents
Chlorpropamide
Antineoplastic Agents
Vincristine
Cyclophosphamide
Diuretic
Thiazide
Tranquilizers
Amitriptyline
Isocarboxasid
Thioridazine
Fluphenazine
Thiothyxene
Carbamazepine
Others
Oxytocin
Acetaminophen
Morphine

TABLE 3
CLINICAL RECOGNITION OF SIADH

1. Clinical symptoms of underlying disorder
2. Neurologic symptoms
    - Personality changes
    - Headaches
    - Lethargy
    - Coma
    - Seizures
3. Gastrointestinal symptoms
    - Anorexia
    - Nausea
    - Vomiting

TABLE 4
LABORATORY RECOGNITION OF SIADH

- Diagnostic
    - Hyponatremia with
    - Hypoosmolality with
    - Urine that is less than maximally dilute
    - Increased urinary sodium excretion
- Corroborative
    - Low blood urea nitrogen (BUN)
    - Low creatinine
    - Hypokalemia
    - Hypocalcemia
    - Hypouricemia

during obstetrical procedures has been reported. Natural oxytocin contains small amounts of vasopressin and has a greater antidiuretic activity than synthetic oxytocin. Prolonged use of oxytocin and sodium-free fluids requires close monitoring of serum sodium to detect SIADH.

Others. Acetaminophen, isoproterenol and morphine have been implicated in SIADH hyponatremia. The list will certainly grow as more drugs are made available.

CLINICAL (TABLE 3)[2, 3]

Symptoms of SIADH are mainly nonspecific, and a high index of suspicion is needed if the correct diagnosis is to be made. It is hard to determine if symptoms are secondary to the underlying condition or to water intoxication. Patients usually remain asymptomatic with a serum sodium value greater then 120 mEq/liter. Many patients are discovered at this stage by routine laboratory analysis. The earliest symptoms usually occur when the serum sodium value is between 110 and 120 mEq/liter. These include headaches, anorexia, nausea, vomiting and personality changes. As the serum sodium falls below 110 mEq/liter, more severe neurologic symptoms predominate. The patient will suffer decreasing consciousness and, often, coma. Seizures frequently occur. It must be remembered that these patients are not edematous and do not have signs or symptoms of intravascular depletion such as tachycardia or orthostatic hypotension. Frank psychotic states often occur and SIADH must be considered the differential diagnosis of abnormal mental states.

DIAGNOSIS (TABLE 4)[2, 3]

Laboratory test that aid in the recognition of SIADH can be divided into two groups: diagnostic and corroborative.

Diagnostic laboratory abnormal results include the demonstration of plasma hyponatremia and hypotonicity occurring simultaneously with an inappropriately high urine osmolality. To develop SIADH, excessive ADH activity must occur simultaneously with water intake. A cachectic patient may initially have a normal serum sodium concentration. With rehydration, however, the patient may develop hyponatremia and hypoosmolality. It is important to note that urine osmolality need not be greater than serum osmolality but only less than maximally dilute for the concomitant plasma tonicity. SIADH is a unusual cause of hyponatremia in that renal salt excretion is inappropriately high. A sodium load administered to the patient will quickly be lost due to excessive excretion. Many times urine sodium excretion may appear low, but it is because the patient has achieved a new steady-state that reflects sodium intake. Bioassays of ADH can aid in making a specific diagnosis. However, it is usually not readily available.

In all cases, pseudohyponatremia must be excluded. Marked hyperglycemia, hyperlipidemia and hyperproteinemia may produce hyponatremia. In the latter two cases, however, the plasma osmolality will be normal. In addition, Katz has shown that for every 100 mg% elevation of serum glucose above 100 mg%, the plasma sodium concentration decreases 1.6 mEq/ml.[12]

Corroborating laboratory findings usually are nonspecific and may reflect the underlying disorder or water intoxication. Associated findings include hypokalemia, hypocalcemia, hypouricemia and hypoalbuminemia. True hypocalcemia is unusual. Both the serum creatinine and the blood urea nitrogen may be low. The electrocardiogram is nonspecific for the underlying metabolic disorder. Adrenal function should be checked to exclude Addison's disease, which is part of the differential diagnosis. In addition, the patient's thyroid function should be known.

TABLE 5
TREATMENT OF SIADH

1. **Identification and treatment of underlying disorder**
2. **Withdrawal of precipitating drug**
3. **Water restriction in mild cases**
4. **Furosemide and 3% hypertonic saline in acute cases**
5. **Demeclocycline or lithium carboate in chronic cases**

Treatment (Table 5)[13-18]

Treatment of SIADH is at two levels. The first is to identify and, if possible, eliminate the underlying disorder. This is often as simple as discontinuing a medication.

The second level of treatment is directed at the water excess. In mild cases, simple fluid restriction usually is sufficient. Until the serum sodium concentration normalizes and symptoms abate, water intake should not exceed urinary output. Only when serum sodium is normal should fluid intake match urinary output plus insensible fluid loss. Careful monitoring of the patient's clinical and laboratory status is mandatory. In severely symptomatic patients, 3% hypertonic saline and furosemide administration is the treatment of choice. This combination provides for rapid normalization of serum sodium concentration while decreasing the risk of pulmonary edema formation. Furosemide is given in a single dose of 1 mg/kg body weight. Urinary sodium and potassium should be monitored and replaced with 3% hypertonic saline with the appropriate potassium concentration added. Furosemide may be repeated as indicated by the clinical or laboratory course.

Chronic cases of SIADH may be managed with demeclocycline or lithium carbonate. Both drugs work by interferring with the normal effect of ADH to increase adenyl cyclase generation of cyclic AMP in the renal tubules. In the study by Forrest *et al* that compares the two compounds, demeclocycline was judged superior and was successful in correcting all patients' clinical and laboratory abnormalities without fluid restrictions. Onset of action may not be seen for several days and, thus, is not useful in the acute phase of treatment. Nephrotoxicity has been reported with demeclocycline and renal function should be monitored. As with other tetracyclines, precautions against photosensitivity should be followed. Demeclocycline dosage should not exceed, 2,400 mg/day. Lithium carbonate is considered less effective and has more potential toxicity, but it may be indicated at times. The recommended dose is 900 mg/day.

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> "The Federal Government must and shall quit this business of relief. . . . Continued dependence upon relief induces a spiritual and moral disintegration, fundamentally destructive of the national fiber."
>
> Pres. Franklin D. Roosevelt's Message to Congress in 1935.

STEVEN H. CRUIKSHANK, M.D., THOMAS M. McNEILLIS, D.O.
and HARRY D. WISE, III, M.D., *Kansas City*

Mucinous Cystadenocarcinoma of the Ovary Associated With Pregnancy

Case Report and Review

MUCINOUS CYSTADENOCARCINOMA of the ovary associated with pregnancy is rare. Jubb reviewed the English literature from 1822 to 1963 and found only 34 cases of ovarian malignancy associated with pregnancy.[1] Novak reviewed 2,300 cases of ovarian neoplasms accumulated in the Emil Novak Tumor Registry between 1942 and 1972 and found 100 cases of ovarian neoplasms associated with pregnancy.[2] Of those cases, eight were mucinous tumors and only one was an adenocarcinoma.

Munnell reviewed 15 years of experience at Columbia Presbyterian Medical Center. He found only three primary ovarian malignancies during pregnancy in more than 50,000 live births for an incidence of one in 18,000.[3] Chung and Birnbaum reviewed 160,889 pregnancies at New York Hospital Cornell Medical Center from 1951 to 1970 and discovered six ovarian malignancies for a comparable incidence of one in 25,000.[4] White reviewed 35,461 births between 1961 and 1970 and found 37 cases of ovarian neoplasms for an incidence of one in 951. Only three were malignant.

CASE REPORT

A 37-year-old Gravida two, Para one, white woman was transferred from Lakewood, Mich. to Blodgett Memorial Medical Center in Grand Rapids. Significant past medical history showed that the patient had had a cesarean section during her previous pregnancy for cephalopelvic disproportion 15 years prior to her current pregnancy.

Upon arrival, physical examination showed a blood pressure of 112/65 and pulse rate of 104. Respirations were 20. The uterine fundus measured 41 cm in height by measuring tape. An external fetal monitor was applied and dismayed irregular contractions every 6 to 10 minutes. The cervix was 2 cm dilated and 60% effaced. The fetus was in cephalic presentation at zero station. The amniotic membranes were intact. A large right upper quadrant mass was readily apparent on abdominal examination. The mass had been noted earlier in pregnancy. After ultrasonography, it was felt to be of ovarian origin. An abdominal anterior-posterior roentgenogram obtained after her transfer confirmed the presence of a mass estimated to be larger than 30 cm. A complete blood cell count (CBC) revealed a hemoglobin value of 11.1 gm/100, and hematocrit value of 34.3%. White blood cell count (WBC) as 7,900 with a normal differential. Results of a urinalysis and chest x-ray were normal.

A repeat cesarean section and exploratory laparotomy were performed. A 3,459 gm female infant with APGAR scores of 7 and 8 at 1 and 5 minutes, respectively, was delivered. A large cyst arising from the right ovary filled the right upper abdominal quadrant (Figs. 1 & 2). It was removed in toto by performing a right salpingo-oophorectomy. The mass was not adherent in the abdominal cavity and there was no apparent increase in peritoneal fluid. Peritoneal washings for

This article describes a case of the largest reported mucinous cystadenocarcinoma of the ovary associated with pregnancy. Fewer than 75 cases have been previously reported in the world literature. The authors discuss diagnosis and management and state that mucinous cystadenocarcinoma has the best prognosis of all malignant neoplasms associated with pregnancy.

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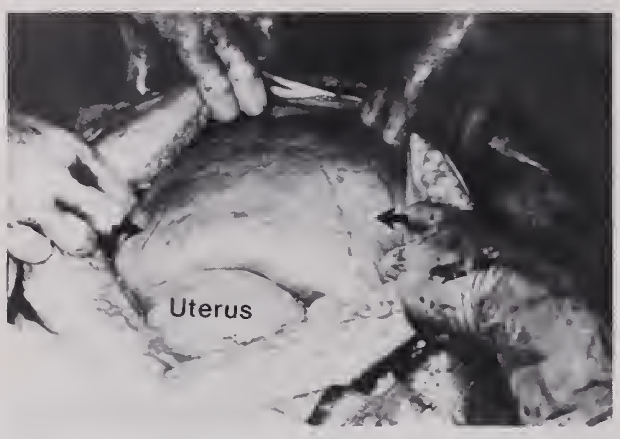

Fig. 1 Ovarian mass *(arrows)* at laparotomy after cesarean section.

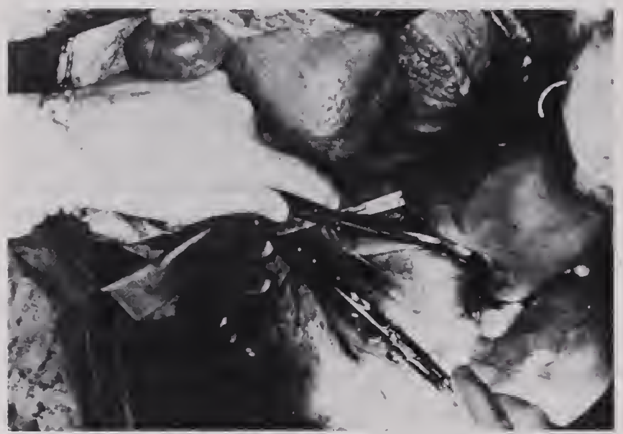

Fig. 2 Left salpingo-oophorectomy being performed.

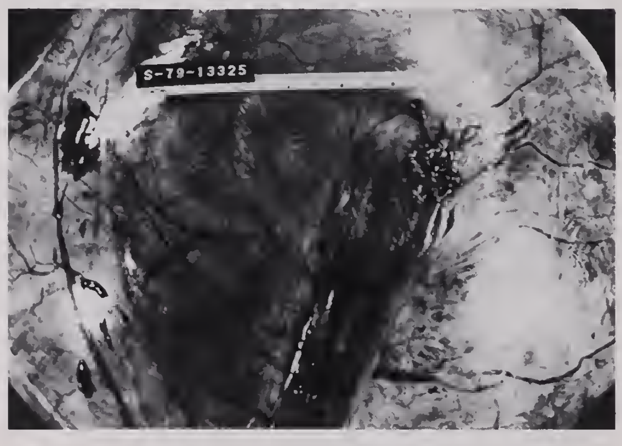

Fig. 3 Gross surgical specimen.

cytology were done prior to cesarean section. The left ovary, liver and omentum were grossly normal. There was no evidence of metastatic neoplasm.

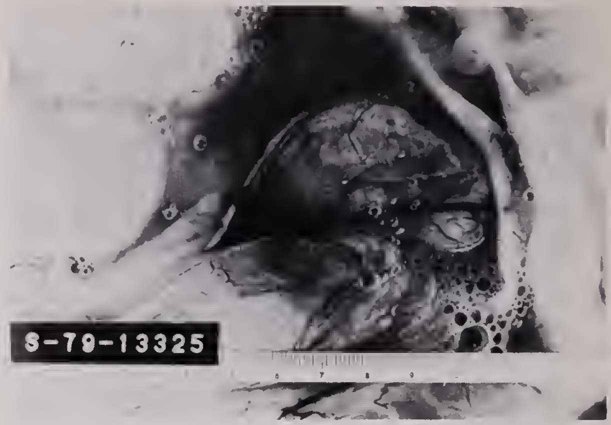

Fig. 4 Area of mass depicting numerous cysts.

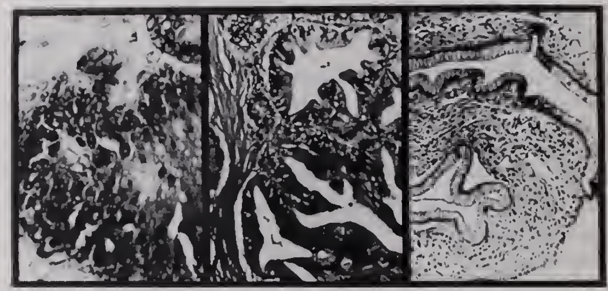

Fig. 5 Composite photomicrography with solid, papillary and mucinous areas of the tumor.

The tumor weighed 4,700 gm and measured 34 cm × 33 cm × 12.5 cm (Fig. 3). The surface was smooth. When opened after surgery, it contained a thick, viscid, pale, yellow to white material. The cyst was distinctly multiloculated. The loculations ranged in size from 1 cm to 19 cm (Fig. 4). Microscopic examination revealed a multicystic ovarian tumor lined with columnar epithelium characteristic of a mucinous cystadenoma. Other areas showed the epithelium to be rolled into proliferating papillary folds with nuclear hyperchromatism and increased mitotic activity. There also were solid areas with glandular proliferation and no intervening fibrous stroma (Fig. 5). This represented a well-differentiated mucinous cystadenocarcinoma.

The patient was discharged from the hospital on the fifth postoperative day in satisfactory condition. Consultation was obtained from a gynecologic oncologist who recommended a total abdominal hysterectomy and left salpingo-oophorectomy to be performed approximately six to eight weeks later. The patient underwent that procedure without complications, and examination of the removed tissue showed no further evidence of malignancy.

Comment

In 11 reported series of ovarian neoplasms

(Continued on page 703)

JAMES KAPLAN, *Kansas City*

Diagnosis and Management of Dementias in the Elderly Individual

SEVERAL STUDIES have addressed the difficulty of establishing a precise diagnosis of dementia. Marsden and Harrison examined 106 patients with a hospital diagnosis of dementia. For 15, the initial diagnosis of dementia was found to be inaccurate and for seven it was uncertain. Treatable or curable diseases were diagnosed in 44 patients.[1] Medically or surgically reversible conditions were found in 30% of patients with progressive intellectual deterioration as studied by Freemon.[2]

Seltzer and Sherwin, in a study of 80 patients at a Veterans Administration neuropsychiatric hospital, demonstrated that the nonspecific label, "chronic brain syndrome," was inadequate in 77 of the 80 patients for whom more specific diagnoses could be made and was incorrect for 6% of the patients.[3] Numerous studies have shown that patients for whom dementia was initially diagnosed will have reversible disorders in 10% to 15% of all cases and that specific therapy will be indicated in an additional 25% to 35%.[4, 5]

DEFINITION OF DEMENTIA

Several definitions of dementia exist, each of which underscores the chronicity and diffuse nature of cerebral dysfunction.

Cummings and his colleagues developed an operational definition which succinctly summarizes the salient clinical features of dementia as the following:

> An acquired, persistent impairment of intellectual functions with compromise in at least three of the following spheres of mental activity: language, memory, visuospatial skills, emotion or personality, and cognition (abstraction and mathematics).[6]

Noteworthy aspects of this definition include the stipulation of acquired conditions that rules out congenital retardation; persistence that excludes acute confusional states, such as intoxication or delirium; and multifactorial dysfunction that eliminates focal or isolates deficits. Both reversible and irreversible causes are included in this definition. The recognition of this syndrome "implies the need for thorough investigation of potentially treatable causes of mental alteration."[7]

The prevalence of senile dementia is predicted to increase in the absolute number and relative percentage of the total elderly persons as longevity trends progress. Estimates in 1968 and 1980 indicated that 10% to 20% of the population older than 65 years have evidence of the impaired intellectual function.[8, 9] In some institutionalized geriatric populations, the prevalence of impaired intellectual function may range from 50% to 75%.[10] Because annual expenditures in health care for the elderly are rising, the need for attention to reversible or preventable dementias is obvious. Some experts estimate that 100,000 to 200,000 deaths per year are associated with senile dementia and include this disorder among the four or five major contributing factors to death in the elderly.[11]

DIAGNOSTIC FEATURES

Recognition is the first step toward effective management of this disease. Although a discussion of a more elaborate differential diagnosis will follow, the initial distinction to be made is between delirium and dementia. In general, dementia is progressive with a sustained or stepwise

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Numerous studies have shown that the hospital diagnosis of dementia, without further clarification, is inadequate. Reversible disorders are present in 10% to 15% of all cases and specific therapy is indicated in an additional 25% to 35%. Identification of potentially treatable causes of mental alteration is mandatory following recognition of a multifactorial, acquired, persistent impairment of intellectual functions.

The author reviews a definition of dementia, outlines major diagnostic features and discusses the disorders that cause irreversible and reversible forms of dementia. Patient evaluation, management techniques and treatment alternatives are also discussed.

Mr. Kaplan is a medical student at the University of Missouri-Kansas City School of Medicine.

TABLE 1
DELIRIUM VERSUS DEMENTIA

Feature	*Delirium*	*Dementia*
Typical onset	Acute	Progressive or stepwise
Course	Rapid changes	Variable
Level of consciousness	Depressed and fluctuating	Intact until late
Autonomic signs	Flushing, tachycardia, tremor, fever	Rare
Psychiatric features	Hallucinations or delusions	Uncommon
Sleep patterns	Day-night reversal	Normal pattern, amount varies

global impairment of cognition. Consciousness is intact and does not fluctuate except in late phases or when delirium is superimposed. In contrast, delirium more commonly has an acute onset and rapid deterioration of a clouded and fluctuating sensorium, accompanied by autonomic signs, hallucinations, delusions and reversal of day-night sleep patterns (Table 1).

Dementia is said to pass through three progressive phases.[12] Although the initial presentation may occur at any time in the course of this process, irreversible dementias usually progress through these phases and reversible dementias may follow an irreversible course if untreated.

In the early phase, subtle changes occur and are noted most commonly by family, employers or friends, but they may be effectively concealed. Memory loss, irritability, decreased mathematical prowess and failing attention may become noticeable. At some stages of the early phase, the demented patient retains insight into his deficits and may be distressed enought to seek help. However, the nature of global dysfunction is such that this rarely occurs.

In the middle phase, the ability to conceal the classic deficits in judgement, orientation, intellect, affect and memory is lost. Recent memory loss is usually the first apparent difficulty, with insight and judgment impaired later.

The late phase is characterized by dramatic personality change and identity loss. Neurologic dysfunction may cause defects in coordination, speech or swallowing. Incontinence of urine and feces frequently develop. Final stages include delirium, obtundation, stupor, coma, and then, death.

The clinical features in these phases can be divided into two syndromes: neat and sloppy dementia. Neat dementia is largely a deficit in recent memory and cognition. Memory loss is *anterograde*, preventing new knowledge acquisition, and *retrograde*, affecting the most recent memories first. Disorientation to time and place and general confusion are notable. An inability to focus one's attention is accompanied by anomia, paraphasia and deficient abstraction. Neat dementia is considered to be the result of the pathologic condition of the temporal and parietal lobes of the brain.

Sloppy dementia, in contrast, is believed to accompany frontal lobe pathologic conditions and is generally a deficit in personality and behavior characterized by apathy, irritability and unconcern. Behavior is uninhibited and activities of daily living are disregarded. Attention span is quite short and memory is faulty due to lack of concentration, although the deficit is less marked than that of neat dementia and recent memory may remain normal. Lability of emotion is often present. Neat and sloppy dementias may exist alone, together or one after the other.

There are many causes of dementia. Wells examined six studies comprising full evaluation of 417 patients that included inpatients and community elderly.[5] His results are summarized in Table 2.

Several points should be made about these data. First, dementia of unknown cause probably represents what Tomlinson and others have shown to be senile dementia of Alzheimer's type (SDAT), the largest single group of dementias.[13] Second, 10% to 15% of the cases are potentially reversible (normal pressure hydrocephalus, intracranial masses, drug toxicity and others) and an additional 25% to 30% of the cases would benefit

TABLE 2
DIAGNOSIS OF 417 PATIENTS
FULLY EVALUATED FOR DEMENTIA

Diagnosis	*Number*	*Percent*
Dementia of unknown cause	199	47.7
Alcoholic dementia (Korsakoff's)	42	10.0
Multi-infarct dementia	39	9.4
Normal pressure hydrocephalus	25	6.0
Intracranial mass	20	4.8
Huntington's chorea	12	2.9
Drug toxicity	10	1.7
Post-traumatic	7	1.7
Other diagnoses in under 1% each*	28	6.7
Pseudodementia (60% depression)	28	6.7
Dementia uncertain	7	1.7

* Includes epilepsy, Creutzfeldt-Jakob, subarachnoid hemorrhage, encephalitis, amyotrophic lateral sclerosis, Parkinsonism, pernicious anemia, hypothyroidism, syphilis, liver disease, progressive cerebellar degeneration, cerebral anoxia.

from some therapeutic intervention. Third, it should be noted that the majority of patients in these studies were selected because they presented diagnostic dilemmas. It is possible, therefore, that some SDAT and multi-infarct dementia (MID) cases, which often represent up to 80% of demented patients, may not have been considered in this survey.[5]

Most studies classify the dementias into irreversible and reversible disorders. A third group, the pseudodementias, is the result of psychiatric disorders, the most common being depression. Wells has characterized the features that help to differentiate these patients from the truly demented[5] (Table 3). Differentiation may often rely on subtle differences in onset, course or behavior during mental status examination.

TABLE 3
DIFFERENTIATING DEMENTIA FROM DEPRESSION

Feature	*Dementia*	*Depression*
Chief complaint	Apathy or unaware of cognitive loss and attempt to conceal dysfunction	Many nonspecific complaints including memory loss, patient is distressed
Course	Slow, insidious progress, onset difficult to pinpoint	Rapid onset, may have clear precipitating factor
Response to questions	Approximate or "near-miss" answers typical	"Don't know" answers predominate
Performance	Struggles to perform well and is frustrated	Apathetic and puts forth little effort
Affect	Shallow or labile	Depressed
Attention span	Often impaired	Intact masked by apathy

IRREVERSIBLE FORMS

Only a few disorders cause irreversible dementias. If untreated, however, some delirious states or reversible dementias may progress to an irreversible degree of damage. Eighty percent of the dementias of old age are due to either SDAT or MID.[9] Other irreversible causes include severe loss of functioning cortex as in brain trauma, major stoke or anoxic damage; Pick's disease; Huntington's disease; Creutzfeldt-Jakob disease; and several diseases characterized by neurofibrillary tangles (pre-senile Alzheimer's disease, progressive supranuclear palsy or Steele-Richardson-Olszewski syndrome, Parkinsonism and adult Down's syndrome).

Major studies of Alzheimer's disease in 1948 and 1953 recognized its clinical and pathological similarity to senile dementia.[14] The quantitative correlation between the presence of neurofibrillary tangles and senile plaques in the cerebral cortex with impaired intellectual function was recognized by Blessed, Tomlinson and Roth in 1968.[15] Terry found that there were neurofibrillary tangles and senile plaques in the senile and presenile dementias and in the normal elderly persons over the age of 80, confined in the latter group to the hippocampus.[16] A conference later determined that the term Alzheimer's disease would be used for this pathologic condition in demented patients under 65 years of age or senile dementia of Alzheimer's type for those over 65.

A neurofibrillary tangle is composed of pairs of helically coiled 10 nm filaments with a regular constriction every 80 nm, a molecular weight of 50,000 daltons and resemblance to B-tubulin. Senile (neuritic) plaques are a core of amyloid surrounded by degenerating axons, mitochondria, lysosomal enzymes, paired helical filaments and other neuronal debris. The true relevance of these abnormal accumulations of debris is unknown; however, they are found in Alzheimer's disease, SDAT, postencephalitic Parkinsonism, Steele-Richardson-Olszewski syndrome, Parkinson-dementia complex of Guam, adult Down's syndrome, Pick's disease and, to a much lesser extent, in a normal aged brain.

Other contributions to the possible pathologic conditions in SDAT have been postulated. Reduced activity of choline acetyltransferase in specific brain regions, especially in the parietal, temporal and frontal cortex with an 80% reduction in the hippocampus have been correlated with SDAT in several studies by Davis and Mahoney in 1976[17] and by others.[18, 19] The genetic risk of Alzheimer's disease was calculated by Sjogren *et al* to be 3.8% in siblings of affected patients and 10% in parents as compared to a risk of 1% in the general population.[20]

Although the mode of inheritance is not yet clear, Heston has shown a relationship between Alzheimer's disease, SDAT. Down's syndrome, hematologic or myeloproliferative disorders and chromosomal abnormalities in chromosome 21.[21] Similar hematologic associations were made by Stam and Op den Velde who found that the presence of the Hp-1 gene (which produces a unique haptoglobin), increases the risk of Alzheimer's, SDAT and leukemia.[22] Another feature of the brains of SDAT patients is a ten- to 30-fold increased concentration of aluminum, a substance shown to induce neurofibrillary tangles in animal brains.[23, 24] High parathormone levels, seen in some SDAT cases, are associated with increased aluminum absorption and uptake into the brain in animals.[25] Patients with SDAT have been shown to have low brain IgM levels that correlated with poor intellectual function as well as a decline in suppressor T-cells and a rise in antibrain antibodies.[11]

SDAT affects men and women in equal frequency, generally progressing from the neat to sloppy type. There is marked gyral atrophy over the parietal, temporal and frontal lobes with widespread evidence of neurofibrillary tangles and neuritic plaques. Pick's disease is a similar, but unique, disorder that affects women twice as often as men. Although in the early phases of this disease, a frontal lobe personality is present, memory is intact. Gyral atrophy shows a marked "knife-edge" delineation at the superior temporal gyrus dividing the affected frontal and anterior half of the temporal lobes from the remainder of the brain. Although neurofibrillary tangles and neuritic plaques are present, they are less marked than in SDAT, and cytoplasmic "Pick bodies" and neuronal swelling better characterize the micropathology.

The second most common form of irreversible dementia is vascular dementia, often considered to be synonymous with multi-infarct dementia (MID). Arteriosclerosis alone is no longer believed to be the cause of dementia. Yet, multiple cerebral infarctions commonly found in association with hypertension, arrythmias or diabetes mellitus may account for 20% to 25% of all dementias.[10] Other conditions in which dementia, arteriosclerosis and hypertension coexist are the lacunar state and Binswanger's disease.

The onset and degree of dysfunction in MID depends on the site and amount of brain tissue involved. One hundred grams of cortical loss usually results in global cognitive deficits as seen in advanced MID, but less loss may show varied presentations.[10]

Vascular dementia is typically abrupt in onset, stepwise in progress and associated with neurologic signs that may indicate the affected area. In the case of thromboembolic cardiovascular accidents, a history of stroke will be clear and a treatable condition such as hypertension, arrythmia or diabetes may exist. The lacunar state is the result of many small (less than 10 mm) infarcts in the deep structures of the brain, with the basal ganglia, thalamus, internal capsule and pons the most frequent sites. This results in MID accompanied by long tract signs, pseudobulbar palsy, characteristic gait, spastic limbs with hyperreflexia and a marked lability of emotional responsiveness.

Binswanger's disease is a subacute leukoencephalopathy of arteriosclerotic origin which affects long, deep white matter arteries and typically spares areas supplied by shorter vessels. This dementia is often accompanied by multifocal neurologic dysfunction such as hemiparesis, hemianesthesia, unilateral visual field defects, hemanopsia and aphasia.

Vascular inflammatory disease may also affect intracerebral and meningeal vessels if untreated. MID may be the result of granulomatous arteritis or similar disorders.

A small number of the irreversible dementias result from Huntington's chorea, an autosomal dominantly inherited disease of progressive dementia and movement disorder related to neuronal loss in the neostriatum and in the cortex, globus pallidus and subthalamic nuclei. Personality changes are more common than memory loss. Unique to this form of irreversible dementia is choreoathetosis, although some patients have akinesis. Postulated biochemical lesions include a relative excess of dopamine to acetylcholine or a lack of gamma-aminobutyric acid (GABA) in the basal ganglia. Huntington's movement disorders decrease with the major tranquilizers, isoniazid or amantidine, but the dementia persists. This disorder most commonly appears in middle age and results in progressive dysfunction leading to death within 15 years.[9]

Creutzfeldt-Jakob disease is a rare, transmissible degenerative disease which presents as progressive dementia, myoclonus, generalized paralysis with amyotrophy and a fatal outcome within one year. The microscopic appearance of status spongiosus with neuronal loss, astrocytic proliferation and hypertrophy has been noted, but the resistance of the agent to common forms of sterilization and its delayed, rapidly fatal course has dimmed enthusiasm for study of these abnormally firm and shrunken brains.

REVERSIBLE FORMS

Reversible dementia may be the result of more than 70 causes. It is exceedingly important to recognize that reversible dementias become irreversible if they persist and that they are present in 10% to 25% of all elderly people in some settings.

The reversible dementias fall into ten classes as shown in Table 4, which is adapted from the NIA

Task Force on Senility.[9]

Many of the cases of reversible dementia may be related to medication side effects or toxicities. Sixteen percent of a group of hospitalized elderly persons had disorders attributable to psychoactive drugs.[12] Because elderly patients have diminished metabolism and clearance capacities, other drugs commonly prescribed may inadvertently be the cause of abnormal mental states. Similarly, exposure to environmental toxins or alcohol may produce decompensation in a patient of borderline function.

Endocrine disorders will frequently be identified by other, more characteristic signs, but they may have different treatment response rates for mental changes as compared to other dysfunction. Systemic illness may be partially compensated but, when imbalanced, can be the origin of dementia. Bronchial carcinoma, immune deficiency with viral or bacterial complications or metastases from lung, breast or, less commonly, kidney, skin or colon, may result in dementia, as can carcinomatous meningitis, the subarachnoid invasion of malignancy, most commonly seen in lymphoma, breast, lung or gastrointestinal cancer and melanoma.[26]

Chronic subdural hematoma may result from subtle trauma in the elderly and may not show localizing neurologic signs. Tumors in the frontal lobes frequently cause dementia and alter personality while producing minimal localizing neurologic signs. Normal pressure hydrocephalus will often present a triad of dementia, gait disturbance and incontinence.

Nutritional deficiencies may be the result of poor intake, malabsorption or inadequate treatment, e.g. folate in pernicious anemia will fail to reverse the neurologic deterioration. Alcoholism may be a direct cause and as in Wernicke-Korsakoff syndrome, it may cause diffuse cortical damage or may predispose to malnutrition.

Infection in the central nervous system (CNS) can be insidious or sudden inset. Fungi, tuberculosis and neuro-syphilis should be considered early in a differential diagnosis.

Finally, pseudodementia due to psychiatric disorders or environmental influences should always be considered.

PATIENT EVALUATION

The preceding differential diagnostic possibilities are rather extensive, yet the work-up of dementia is clear-cut and quite readily discloses most causes of dementia with routine procedures. Every demented patient should have a detailed history, medication review, physical and neurologic examination and mental status evaluation. The history may need corroboration by past records or by relatives and a medication review may entail inquiry into drugs prescribed by others or discontinued in the past. A physical examination should focus on any evidence of organ failure or neurologic signs. Mental status evaluation is very important, and the present state as well as serial evaluations may be quite valuable. Pfeiffer's Short Portable Mental Status Questionnaire has the advantage of quantitative clinical validation and ease of administration.[27] In addition to mental status evaluation, the possibilities of depression or language barriers on neurologic or other grounds should be considered and additional psychologic testing may be necessary.

Ancillary examinations recommended by the NIA Task Force on Senility include the following:

1. Hematologic examination (complete blood cell count [CBC], erythrocyte sedimentation rate [ESR])
2. Urinalysis (albumin, glucose, ketone levels and microscopic examination)
3. Stool examination, including test for occult blood
4. Serum levels of urea or blood urea nitrogen (BUN), glucose, sodium, potassium, chlo-

TABLE 4
ETIOLOGY OF REVERSIBLE DEMENTIAS

Medications: Psychoactive, antihypertensive, anticonvulsant, anticholinergic, other
Chemical Intoxications: Heavy metals (arsenic, lead, mercury); industrials (carbon monoxide, carbon disulfide, toluene, organophosphate, trichorethylene)
Metabolic or Electrolyte Disturbance: Hepatic encephalopathy, uremia or renal disease, Wilson's disease, hypercalcemia, hyponatremia
Endocrinopathies: Hypo- and hyperthyroidism, Addison's or Cushing's disease or exogenous steroids, hypo- or hyperglycemia, pituitary dysfunction, hyperparathyroidism
Systemic Illness: Cardiovascular (arrhythmia, congestive heart failure, endocarditis), pulmonary (hypoxia, hypercapnia)
Intracranial Disorders: Trauma or post-trauma, subdural hematoma, cerebrovascular accident or anoxia, tumor (meningioma, glioma, metastasis), hydrocephalus (communicating, non-communicating), multiple sclerosis, parkinsonism
Cerebral Infections: Meningitis (tubercular, fungal, viral), abscess, neurosyphilis
Nutritional Deficiency: Wernicke-Korsakoff (thiamine), anemia (B12, folate), pellagra (niacin)
Environmental: Sensory deprivation (vision, hearing) or barrage
Psychiatric: Depression, postelectroconvulsive therapy, schizophrenia

   ride, carbon dioxide, calcium, phosphorus, bilirubin, B12 and folate

5. Thyroid function tests
6. Test for syphilis (VDRL) or fluorescent treponemal antibody absorption test (FTA-ABS)
7. Chest roentgenogram
8. Electrocardiogram (ECG)
9. CT scan of the brain[9]

Radionuclide scanning of the ventricular system, cerebrospinal fluid (CSF) examination by lumbar puncture, or other confirmation may be indicated by the results of the initial examination.

MANAGEMENT AND TREATMENT

Management of the demented patient begins with attention to the reversible or treatable causes of the disorder. Psychological support may be given to preserve or capitalize upon the remaining degree of orientation and prevent detriment from environmental factors such as sensory deprivation, irregular schedules or absence of orienting tools like clocks or calendars. Vision and hearing deficits should be corrected.

Some authorities recommend a therapeutic trial of antidepressants for cases in which depression cannot be completely eliminated from possibility.[9] Low doses of major tranquilizers have been advoacated for confusion and agitation.[12] Because the toxicities of these medications are so frequent in elderly patients, they should be carefully monitored. Sixteen percent of all institutionalized elderly individuals had dementias that were the result of psychoactive drugs.[28]

Three new treatment options — ergot derivatives, piracetam and dietary supplements — are currently being evaluated and are the source of considerable debate. In a comprehensive literature review, Cook and James caution that although promise has been shown for some agents, "the overall degree of improvement is small" and behavior is one of the areas least improved.[29]

Inadequate data exist on side effects in compromised cerebral circulation or other potentially vulnerable areas. The greatest promise appears to be in the treatment of SDAT.

The ergoloid mesylates (Hydergine®) and nafronyl, which is not available in the U.S., have been shown to improve depressed mood, confusion, mental alertness, irritability, hostility and emotional lability if given in adequate doses over adequate periods of time.[30] It appears that results depend on administration of at least 4.5 mg per day and a treatment period of at least six months before the value of ergot derivatives can be realized. Current postulates for the mechanism of action include improvement of intracellular metabolic state with neuronal stimulation in the reticular formation, pons and midbrain and an influence on the net levels of cyclic adenosine monophosphate (cAMP).

Piracetam is a GABA derivative without analgesic, sedative, tranquilizing, antihistaminic, anticholinergic or antiseratonergic effects. It appears to improve mild dementias, but it is not very effective in severe cases. Piracetam works best to improve memory function and may be effective with long-term administration in prevention of deterioration.[30]

Attempts to supplement choline intake or influence CNS acetylcholine levels are focused on the choline acetyltransferase deficiency seen in SDAT. Dietary choline supplements, even in very large doses, have not shown a beneficial effect to date.[31]

Attempts to inhibit acetylcholinesterase with physostigmine have shown that patient variability and narrow therapeutic range limit practical usefulness.[32] The only agent to show significant effect on behavior was deanol when used in mildly demented patients. This agent does not significantly improve memory or cognition.[33]

The major treatment modalities that appear to be effective at present combine accurate diagnosis, treatment of associated conditions, environmental modification to provide orientation, judicious use of medications to control disruptive behavior or depression and new treatment methods to retard progressive deterioration. It is reasonable to hope that increased attention to accurate diagnosis and early intervention will have a significant effect on the growing population of elderly individuals who are currently incapacitated by the many forms of senile demenia.

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Mucinous Cystadenocarcinoma

(Continued from page 696)

associated with pregnancy by Jubb and Karpathios *et al*, the overall malignancy rate varied from 2% to 5%. The percentage of malignant ovarian tumors associated with pregnancy is well below the 10% to 15% malignancy rate usually expected for ovarian tumors in general. This is consistent with the younger age of the pregnant patient as ovarian cancer occurs more frequently in the fifth and sixth decades of life.

The most common ovarian neoplasms associated with pregnancy are benign cystic teratomas, serous cystadenomas and mucinous cystadenomas. The presenting symptom is usually pain or abdominal swelling. The mass is often discovered during the pelvic examination at the time of the initial prenatal visit. Unless torsion or rupture occurs or malignancy is suspected, laparotomy should be delayed until the second trimester. This decreases the risk of spontaneous abortion or inadvertent interruption of the corpus luteum. If malignancy is suspected, surgical therapy should be performed immediately regardless of the stage of gestation because of the generally poor prognosis of ovarian epithelial malignancies. In the occasional patient with a unilateral tumor (FIGO-Stage 1A), which proves to be a mucinous cystadenocarcinoma or a histologically low grade tumor, a unilateral salpingo-oophorectomy is performed and the pregnancy is allowed to continue.

The prognosis for mucinous cystadenocarcinoma associated with pregnancy is related to the most malignant area of the tumor histologically.[5] Surgery is the primary mode of therapy. Conservative surgery carries the responsibility of adequate follow-up for many years since 20% to 40% of ovarian cancers are bilateral and the second ovary may be involved in five to ten years. Although the risk of ovarian cancer occurring in association with pregnancy is small, the presence of a pelvic mass discovered early in pregnancy cannot be ignored and there is no justification for a policy of nonintervention until the puerperium.

In conclusion, this report describes the largest reported mucinous cystadenocarcinoma of the ovary associated with pregnancy. Less than 75 cases have been previously reported in the world literature.

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Drug Abuse Is Focus of MSMA Auxiliary Fall Conference

Mary Jacobson, president of the National Federation of Parents for Drug-Free Youth, was the principal speaker at the MSMAA's 1982 Fall Conference in Springfield on October 20-21.

Mrs. E. Rule Olson, Springfield, served as chairman of the conference that was hosted by members of Greene County Medical Society Auxiliary who also provided entertainment at the Wednesday banquet.

Ms. Jacobson's subject at the opening seminar was "Drug and Alcohol Abuse by Youth; Auxilians Can Make a Difference." She also addressed the conference at the annual banquet.

Among her other affiliations, Ms. Jacobson serves as a board member on the Omaha Area Council on Alcoholism and Drug Abuse; Advisory Board of Nebraska Prevention Center; Nebraska Prevention Network; and as consultant for the National Institute on Drug Abuse. She has presented workshops in Nebraska, Iowa, Kansas, Missouri, Kentucky, Washington, D. C., Georgia, Colorado and Winnepeg, Canada.

Guest panelists from Springfield were Tom Mountjoy, assistant Greene County prosecutor and chairman of the Springfield Chamber of Commerce & Crime Prevention Committee; H. G. Visio, President of Data Control and the Springfield Families Against Drug Abuse; Nancy Ceaser, M.D., neonatologist and Director of Cox Medical Center Intensive Care Nursery; and Christine Squib, Springfield director of Community Coordinating Council and regional chairperson of the Governor's Council of Alcohol and Drug Abuse.

Mrs. William R. McPhee of Kansas City, MSMA past-president and recently elected to a second term as the AMAA North Central Regional vice-president, conducted a "Program Development Workshop."

Also appearing on the program was MSMA Auxiliary Past-President Mrs. Keith D. Jones of Warrensburg who is now serving as president of the Southern Medical Association Auxiliary.

Other workshops on legislation, health projects, Auction V, MSMV, AMA-ERF and leadership were conducted by the MSMA Auxiliary's respective chairmen.

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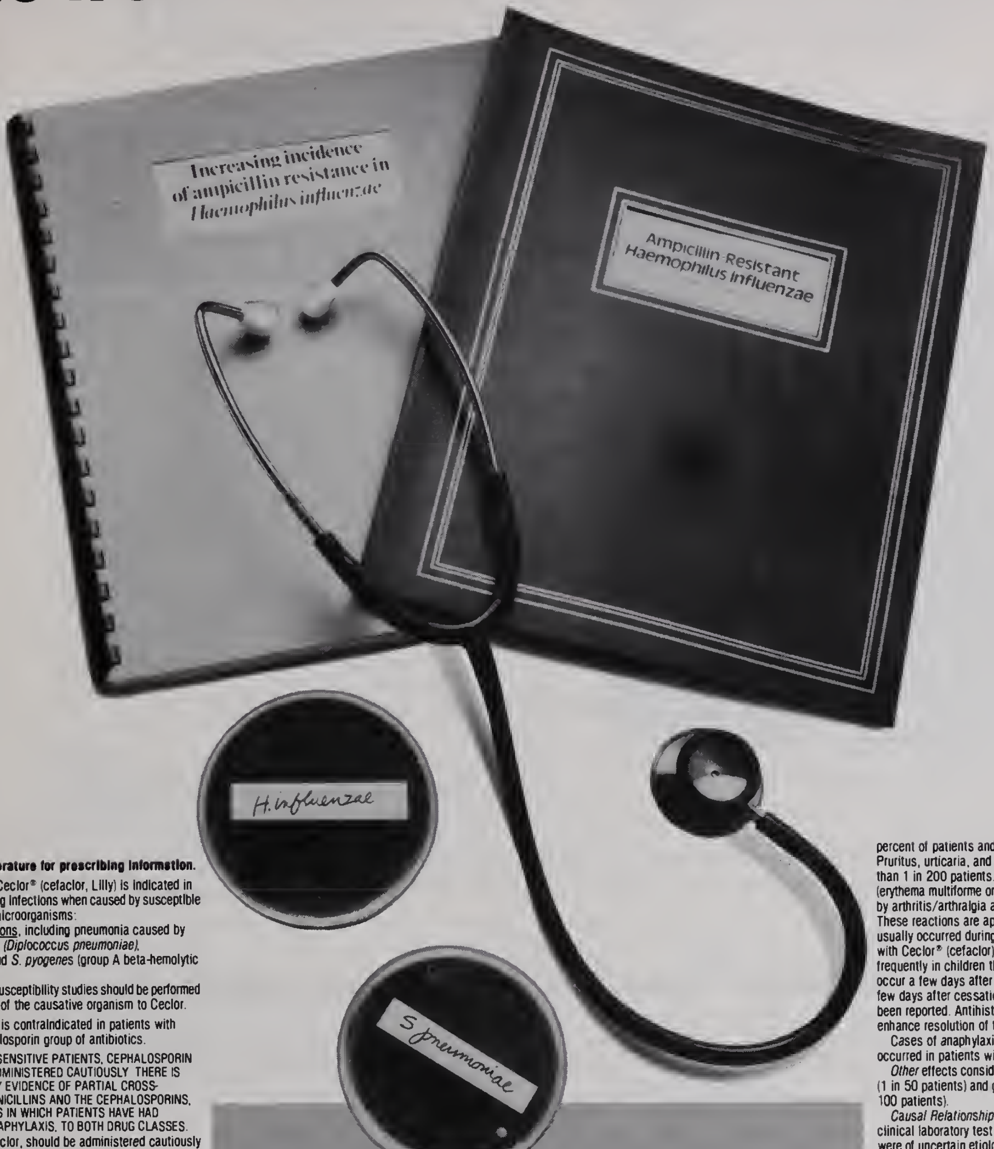

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

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*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H. influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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President's Message

John I. Matthews, M.D.

Most of us are aware of the obvious services performed by our Association. These include legislative liaison, representation before governmental agencies, accreditation of sponsors for continuing medical education, assistance in physician placement, financial loans to medical students, rehabilitation efforts for impaired physicians, insurance programs, public relations, practice information for members and the list goes on and on.

Often overlooked are the many requests for input from organizations that are considering subjects that affect Missouri physicians, our profession and our patients. An example is the letter below to AMA Executive Vice-President James H. Sammons, M.D., expressing my opinion of the "Initial Report and Preliminary Recommendations" of the National Commission on Nursing. The Commission, which issued this report, is sponsored by the American Hospital Association, the Hospital Research and Educational Trust and the American Hospital Supply Corporation. A wide-ranging report with possible important future implications, the Commission's charge is to ". . . address current nursing-related problems in the United States health care system." The Commission is composed of 30 leaders in the fields of nursing, hospital management, medicine, government, academia and business. Included are 15 Registered Nurses, but no Licensed Practical Nurses. My comments follow:

James H. Sammons, M.D.
Executive Vice President
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

August 10, 1982

RE: Initial Report and Preliminary
Recommendations of the National
Commission on Nursing

Dear Dr. Sammons:

Following review of the Initial Report and Preliminary Recommendations of the National Commission on Nursing, the Missouri State Medical Association would express its disappointment.

Since the document completely ignores Licensed Practical Nurses, we would have to classify it as a minority report. In Missouri, informal surveys indicate that over 50% of actual patient care is carried out by LPNs. However, this Nationwide group of 900,000 nurses had no input into the report.

(Continued on next page)

The makeup of the Commission was heavily weighted by advanced degree nurses who, naturally, stressed their beliefs. We have a similar situation in Missouri where the hierarchy of the Missouri Nurses Association is dominated by nurses who have decided that only advanced degree nurses should be in practice. This is contrary to the opinions of the Association's own membership as demonstrated in a survey conducted by MoNA. (enclosed)

The MSMA also believes the National Commission underestimated the economic factor in contemplating reasons that so many nurses leave the practice. Simply stated, when you consider the training, hours and responsibilities of nurses, they are underpaid! In today's job market, women are able to find employment with more benefits and higher salaries than we offer our nurses. It is interesting to note, too, that a 1981 survey of Missouri Registered Nurses by the Missouri Center for Health Statistics states, ". . . the labor force participation rate for nurses is no worse than that for other female-dominated occupations with similar professional status." (See Page 36, Missouri Registered Nurses, 1981, enclosed).

Finally, our Association feels that nurses who desire to perform medical procedures should apply for medical school and receive medical training rather than expend their time and resources pursuing educational courses which lead toward poorly defined titles such as nurse practitioner.

Thank you for this opportunity to express our opinions on this important report.

Respectfully yours,
John I. Matthews, M.D.
President, MSMA

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He that will not apply new remedies must expect new evils for time is the greatest innovator; and if time of course alters things and wisdom and counsel shall not alter them to the better, what shall be the end? — Sir Frances Bacon

Drug Abuse: Curing the Cancer of Our Society

The lead story in the September, 1982, issue of *Facets* magazine (AMA Auxiliary publication) carried the above caption. It quoted Thomas Tseunetomi Noguchi, M.D., Los Angeles's celebrated "coroner to the stars," on the subject of this nation's epidemic of drug abuse. He said, "Let the high school students take a tour of their local morgue. Let them see the finality of death." He sums up the problem in ten words: Marilyn Monroe, Janis Joplin, William Holden, Natalie Wood, John Belushi.

Mrs. Sam Gaston
President

The story goes on to give these alarming statistics from the National Institute on Drug Abuse: "One of every five youngsters between 12 and 17 is abusing drugs; one of every three is abusing alcohol." These statistics have drawn the attention of thousands of concerned parents and civic leaders, including our nation's First Lady Nancy Reagan.

Last March, the AMA Auxiliary president and executive director attended the White House Conference on Drug Abuse. Goals were set that included establishing parent groups in every high school by 1984. The prevention program will concentrate on marijuana and alcohol, the two drugs that create the most problems for young people. President Reagan said that turning off the customers is as important as intercepting the drug traffic.

This was the heart and message of the MSMA Auxiliary's 1982 Fall Conference held in Springfield on October 20-21. We believe the Auxiliary can make a difference in our communities as we lead out in helping to organize parent groups and make prevention a priority. We cannot expect the schools, police or governmental agencies to assume this responsibility.

The MSMA has demonstrated its concern and support with recommendations for promoting educational and preventive programs. With this collective consciousness, the county medical societies and their auxiliaries have the expertise and visibility to impact the communities of Missouri in a "War on Drug and Alcohol Abuse" among our youth. Could the profession involve itself in a more worthwhile cause than preserving today's youth and tomorrow's physicians and leaders?

MSMA Auxiliary members, some 1,450 strong, represent a pool of capable and willing volunteers when a need captures their attention. This number could double or triple if each physician would ask his/her spouse to join the Auxiliary. The members are now involved in numerous community health projects. Many are concerned parents who choose to become involved with the youth of their communities. Here is another opportunity.

Mrs. Reagan concluded her interview for *Facets* by saying: *"Parents are the single most powerful force in this whole problem. A woman is like a tea bag. You never know her strength until she is in hot water."*

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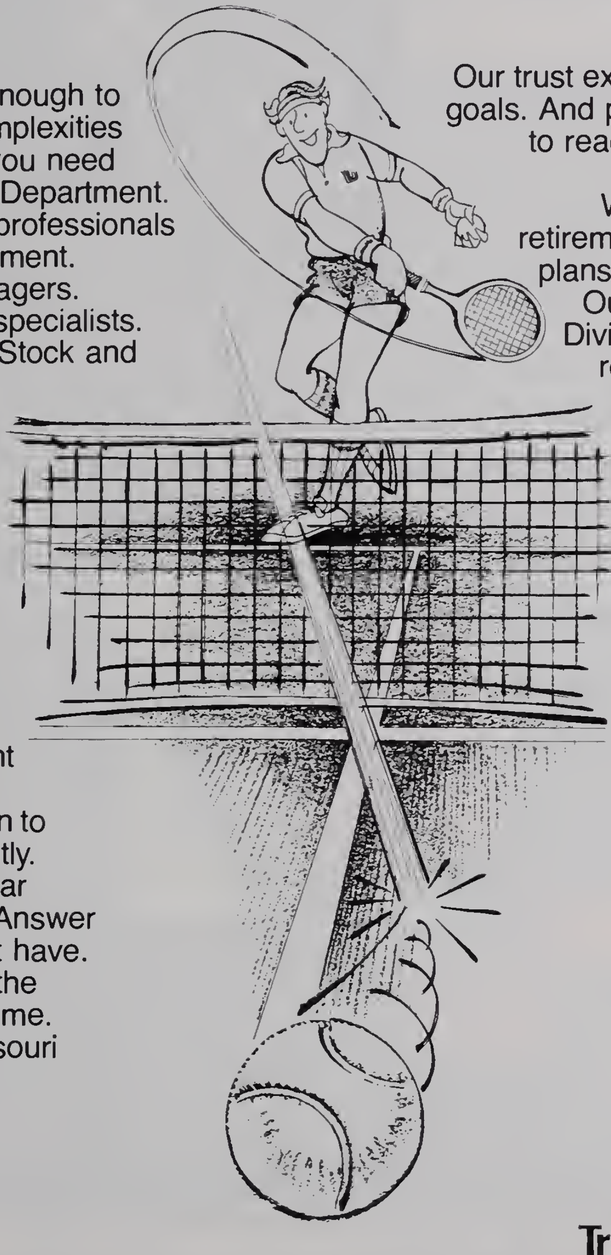

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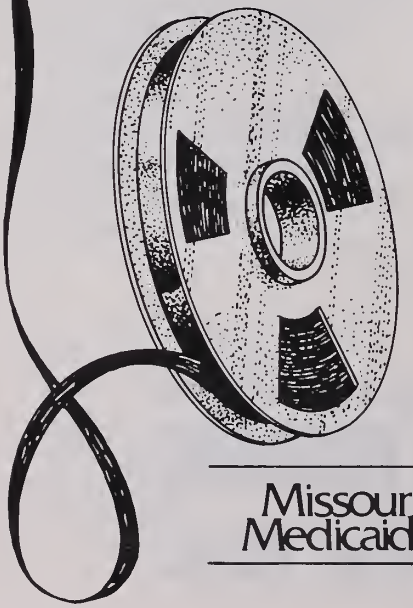

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J-9043-4 July 1981

In the treatment of insomnia

Good mornings start with restful nights.

Dalmane *(flurazepam HCl/Roche)* patients fall asleep faster, sleep longer and seldom awaken with morning hangover.

Feeling well rested in the morning usually means having slept well the night before. And for insomniac patients receiving hypnotic therapy, a good morning also means awakening with few side effects from their medication. Many physicians choose Dalmane for their patients who suffer from insomnia for this very reason.

Aside from enabling patients to fall asleep more quickly and sleep longer, Dalmane seldom causes morning hangover. Most Dalmane patients feel alert and refreshed when they awaken. In 53 paired-night clinical studies comparing Dalmane and placebo in 2010 insomniac patients with a variety of secondary diagnoses, most Dalmane patients awakened more alert and refreshed, and less groggy and drowsy, than on nights when they had taken only placebo.[1] In a double-blind crossover study of 42 patients in private practice, approximately three times as many patients reported feeling refreshed and alert upon awakening after a night on Dalmane (flurazepam/Roche) compared to placebo nights.[2] This difference was highly significant ($p<0.001$). And a retrospective study of 2542 hospitalized patients who received Dalmane revealed only a 3.1% incidence of side effects.[3]

While residual effects from Dalmane therapy are infrequent, patients should be cautioned about drinking alcohol, driving or operating hazardous machinery after ingesting the drug.

Efficacy and safety in a broad range of patient types.

Over 2000 clinical trials involving more than 10,000 patients have shown that Dalmane patients fall asleep sooner, sleep longer and experience fewer nocturnal awakenings.[4] The safety and efficacy of Dalmane have been demonstrated in medical and surgical hospitalized patients, in patients seen in office practice and in elderly patients.[5-8] Since the risk of oversedation, dizziness, confu-

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Contemporary Hypnotic Therapy
'82

sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

Avoids rebound insomnia upon discontinuation.

Rebound insomnia—a worsening of sleep beyond pretherapy levels after drug discontinuation—has been reported as a potential clinical problem with some hypnotics.[9,10] However, this problem has not been reported with Dalmane. In eight out of eight sleep laboratory studies, there were no reports of rebound insomnia.[11] When you prescribe Dalmane, you can be confident of efficacy that enhances therapeutic progress. Your insomniac patients can be assured of a restful night, night after night—a good start for a good morning.

References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **4.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Meyer JA, Kurland KZ: *Milit Med 138*:471-474, Aug 1973. **6.** Feffer HL, Gibbons B: *Med Times 101*(8):130-135, Aug 1973. **7.** Jacobson A *et al*: *Psychophysiology 7*:345, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 1978. **10.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 1979. **11.** Monti JM: *Methods Find Exp Clin Pharmacol 3*(5):303-326, 1981.

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Please see following page for summary of product information.

Dalmane® Ⓒ
flurazepam HCl/Roche
15-mg/30-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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MSMA Members Receive Physician's Recognition Award

Forty-two MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of August, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

Robert E. Bolinske, St. Louis
Mario P. Canlas, Springfield
Lynn N. Carlton, Springfield
George T. Carpenter, St. Joseph
John A. Chanasue, St. Louis
Philip G. Conway, St. Louis
Walter E. Dean, Maryville
Eugene H. Ebel, Florissant
James E. Edwards, St. Louis
Thomas F. Eggleston, St. Louis
Alan S. Gubin, Caruthersville
Victoria Gunn, Jefferson City
Thomas D. Hartnett, Clayton
Philip M. Hornbostel, Kansas City
Joseph J. Hurley, St. Louis
Hiremathada Jayanandaiah, Hannibal
Walter T. Judge, Crystal City
James A. Junker, St. Louis
Thomas R. Kluzak, St. Louis
James J. Lally, Kansas City
Dinesh B. Mehta, St. Louis
James P. Murphy, Clayton
William A. Murphy, St. Louis
Vincent P. Perna, Creve Coeur
Stephen L. Post, St. Louis
Joseph H. Printz, Kansas City
Palle Reddy, Creve Coeur
Louis V. Rosell, St. Louis
Samuel H. Rosen, Clayton
Abdollah A. Sabet, Ballwin
James B. Smith, Clayton
George H. Sobky, Louisiana
Edward M. Stevens, St. Joseph
Cengiz M. Sumer, Bridgeton
Emel A. Sumer, St. Louis
Richard A. Sutter, St. Louis
Robert W. Tichenor, St. Louis
Arthur T. Tuma, Poplar Bluff
Ambrose T. Walker, Thayer
Daniel S. Whitman, Kansas City
James B. Wolfe, Springfield
Charles A. Worley, Sweet Springs

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

St. Louis University Medical Center
Dept. of Orthopedic Surgery
1325 S. Grand Blvd.

Oct. 29-30	Spinal Disorders in Children

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 367-2131
Contact: **Ronald G. Evens, M.D., Director**

Nov. 8 (Correction)	City-Wide Radiology Conference — Radiological Management of the Multiple Traumatized Patient
Dec. 13	City-Wide Radiology Conference — Arteriography and Interventional Radiology
(1983)	
Jan. 10	City-Wide Radiology Conference (St. Louis University)
Feb. 14	City-Wide Radiology Conference — CT Experience from an English Cancer Center
Mar. 14	City-Wide Radiology Conference — New Approaches to Measuring Cardiac Function in Nuclear Radiology
Apr. 11	Leroy Sante Lecture (St. Louis University)
May 9	City-Wide Radiology Conference — Pediatric Radiology
May 6-14	Fifth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (With Inter-American Congress of Radiology) (Acapulco)

The Ed Bixby Institute Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4306
Contact: **Jane L. Jackson, Director of Seminars**

Nov. 13	Organ Retrieval and Transplantation
Dec. 1	Common Neurologic Problems
(1983)	
Feb. 2	Infectious Diseases and Antibiotics
Apr. 6	Acute and Chronic Pain Management
June 1	Pulmonary Disease: Critical Care
Aug. 3	New Radiology Techniques

Sleep Disorders Center
Deaconess Hospital
6150 Oakland Ave., St. Louis 63139
(314) 645-8510, Ext. 2589
Contact: **James K. Walsh, Ph.D., Director**

Oct. 21	A Presentation of Project Sleep (St. Louis Marriot Hotel at Airport)

Washington University
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 454-3873
Contact: **Loretta Giacoletto, Office of CME**

Nov. 12-13	1982 Management of Upper Extremity Injuries
Nov. 18-20	Clinical Allergy for the Practicing Physician
Dec. 3-4	Low Back Pain
(1983)	
Jan. 9-14	Practical Management of Patients With Infectious Diseases (Keystone, Colo.)
Feb. 5-11	1983 Care of the Aging Patient (Cancun, Mexico)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., Director of Surgical Education, for the following:**

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

Contact: **David S. Sneid, M.D., Director of Medical Education, for the following:**

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

Oct. 22	Present Concepts in Leukemia Pathophysiology (with Leukemia Society of America) (Alameda Plaza Hotel)
Nov. 4-6	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society (Alameda Plaza Hotel)
Dec. 2-4	The Heart 1982 (Alameda Plaza Hotel)
(1983)	
Jan. 15-22	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 11-12	The Long Weekend: Update in Infectious Disease, Orthopedics and Pharmacology (Crown Center Hotel)
Feb. 12-19	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Ixtapa, Mexico)
March 10-12	Perspectives in Medical Care (Hyatt Regency Hotel)
March 19-26	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Snowmass, Colo.)
April 21-23	Update in Obstetrics and Gynecology (Hyatt Regency Hotel)
May 12-13	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
May 20-21	The Long Weekend (Hyatt Regency Hotel)
June 4	Physical Fitness (Crown Center Hotel)

As I walked by myself
And talked by myself,
myself said unto me:
"Look to thyself,
Take care of thyself
For nobody cares for thee."

And, now I very well might say,
in serious or jest,
That self-attentiveness might prove
Long run, to be the best.

For, if one does not view himself
With stern determination
Then hardly will associates
Assign him much of station.

Wilfred E. Wooldridge
From: "Mother Goose Brought
Up To Date"

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Samuel A. Wells, M.D.

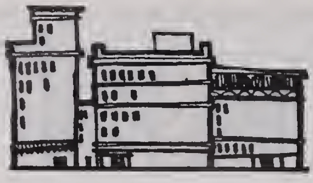
Program Participants

Stanley R. Friesen, M.D.
Professor of Surgery
University of Kansas School of Medicine
Kansas City, Kansas

Edwin Kaplan, M.D.
Professor of Surgery
University of Chicago School of Medicine
Chicago, Illinois

Lawrence W. O'Neal, M.D.
Associate Professor of Surgery
Washington University School of Medicine
St. Louis, Missouri

Tuesday, November 9, 1982
5:30 P.M.
St. Louis Metropolitan Medical Society Auditorium
3839 Lindell Boulevard
St. Louis, Missouri



NEWS
From the Medical Schools

UNIVERSITY OF MISSOURI-KANSAS CITY

Several medical students have received awards for scholastic achievement recently. First-year medical students who received the Chancellor's Award are *Sidney Joan English*, *Nancy Ann Evans* and *Johnna Kay Wilcox*. Selected as UMKC Scholars are *Patricia Allen*, *Mario Castro*, *Jackie Croft*, *Pamela Grant*, *David Heather*, *Susie Liu*, *Michelle McQuinn*, *Susan Melson*, *David Park*, *Suzanne Ramsey*, *Renee Rechtien*, *Kirk Roberts*, *Daryl Thompson* and *Cynthia Williams*.

Sixth-year student *Stephen B. Miller* is the winner of the William J. and Dorothy Fish Kerr Student Fellowship in Cardiology. Mr. Miller is currently a student fellow at the University of California in San Francisco under the sponsorship of Dr. Elliot Rapaport.

Mark F. Brown, a fifth-year student, is the winner of the $1,000 prize for the best essay submitted in the Alfred A. Richman International Essay Contest sponsored by the American College of Chest Physicians. Mr. Brown will receive his award at the College's Annual Scientific Assembly in Toronto this month, at which time the School of Medicine will also be presented a trophy.

The 1982 Summer Scholars Program was a successful experience for the 32 high school students who spent four weeks this summer in the health science schools. *Dr. Willie McLemore,* senior docent at the School of Medicine and director of minority recruitment, and *Dr. Ken Mares*, director of evaluation at Western Missouri Area Health Education Center, coordinated the program. Established in 1980, the program is designed to identify and motivate disadvantaged and minority students in Jackson County and give them a realistic exposure to health science careers.

The Bess Truman Family Practice Clinic at Truman Medical Center-East was formally dedicated on October 2. *Rep. Richard Bolling* and other state and county officials participated in the dedication of the new facility.

Russell Jones, Jr., director of administration at the School of Medicine, has been appointed a member-at-large for the Midwest Region of the Group on Business Affairs of the American Association of Medical Colleges.

The Health Sciences Library has received an allocation of $105,000 for library acquisitions for the 1982-1983 year. This is an increase of $15,000 over last year. According to *Gary Byrd*, chief librarian, the increase is the largest in a single year given to the library. Five thousand dollars of the allocation will be used for the acquisition of books and journals for the School of Nursing.

Richardson K. Noback, M.D., senior docent and head of the Division of Geriatrics, was the counterpart program coordinator for the United States Aging and Health Care Leaders' Goodwill People-to-People Travel Program Delegation to the People's Republic of China. The two-week visit began on June 28 in Peking. The group departed from Shanghai on July 10.

Professional disciplines represented in the group were medicine, surgery, social work, clinical pharmacology, social gerontology, psychiatry, aerospace medicine, nursing, administration, teaching and research, sociology and psychology. Members of the delegation were chosen from all areas of the United States and all had interests in gerontology and geriatrics.

Dr. Noback and other members of the group presented papers in Peking and Shanghai.

Arthur L. Ulene, M.D., chairman of Cable Health Network in New York and an obstetrician/gynecologist, was the featured speaker at the School of Medicine's fifth annual convocation on October 10. Dr. Ulene discussed "The Future of Health Education."

WASHINGTON UNIVERSITY

The Andrew J. Mellon Foundation has presented a $350,000 grant in support of teaching and research to the School of Medicine. Announcement of the gift was made by *Samuel B. Guze*, M.D., vice chancellor for medical affairs.

Washington University is one of only 15 private medical schools in the nation to receive one of the three-year grants that are designed to help retain outstanding young faculty investigators in medical education and biomedical research. The funding will allow Washington University Medical School to provide support to a select few postdoctoral teacher-scientists who plan careers in medical education and basic research.

The Mellon Foundation has sponsored its assistance program since 1973. With the conclusion of the recently renewed grant, the Washington University Medical School will have received Mellon Foundation funding for 12 years.

M. Gilbert Grand, M.D., assistant professor of clinical ophthalmology has been elected to active membership in the Retina Society, a national honorary for retina specialists.

Dr. Grand is one of only seven ophthalmologists in the United States chosen this year by the Retina Society, which was founded in 1968 to encourage the exchange of information about retinal diseases. The organization now has 147 members who were selected for medical and surgical experience, especially retinal, as well as for contributions to the literature and for research or experimental work involving retinas.

Dr. Grand is on the staff of Barnes Hospital and is in practice with Retina Consultants, Ltd. He came to the medical school in 1979 as an instructor in clinical ophthalmology. He previously served three years as assistant professor of ophthalmology and chief of the Retina Service at the University of Pittsburg School of Medicine.

A 1968 cum laude graduate of Yale University School of Medicine, Dr. Grand completed a three-year ophthalmology residency and a one-year retina fellowship at Washington University. He has delivered lectures and published numerous articles on diseases of the retina and vitreous, and is a member of several professional organizations, including the Macula Society, Missouri Ophthalmologic Society, American Academy of Ophthalmology and American Diabetes Association.

ST. LOUIS UNIVERSITY

Ronald B. Margolis, Ph.D., director of the Division of Behavioral Medicine, returned in late August from a three-week visit with a delegation to China that included St. Louis' sister city, Nanjing.

The only Missourian who attended, Dr. Margolis was selected to join a nationwide group of mental health professionals to exchange technical information with the Chinese. The trip was arranged through People-to-People International, a U.S. effort of private citizens to promote the exchange of interests and ideas throughout the world and CAST, the Chinese Association of Science and Technology.

The group visited rehabilitation and mental health facilities throughout China. As clinical director of the Pain Management Program for persons with long-standing chronic pain, Dr. Margolis spoke on "The Management of Chronic Pain" while in Nanjing.

"Since the cultural revolution in China, the Chinese are just beginning to integrate Western approaches to health problems with their traditional practices," says Dr. Margolis. "It was exciting to see their attempt to use different models of treatment."

Professional medical education is now available via satellite to ophthalmologists across the nation. EyeSat, a satellite-relayed professional educational education program in ophthalmology and produced at the medical center, is the first of its kind in the field of medicine to relay information via satellite on a regular basis.

Offered as a not-for-profit service of the Bethesda Eye Institute at the School of Medicine, EyeSat is the result of work led by *Francis O'Donnell Jr.*, M.D., chairman of the Department of Ophthalmology and director of the Institute. He is the editor of *EyeSat*, which draws its medical board members from 14 schools in the nation.

Dr. O'Donnell Jr.

"The application of satellite telecommunications to the teaching of medicine represents the beginning of a new era in medical education," says Dr. O'Donnell. "This first use in the field of ophthalmology doubtless will be followed in other clinical specialties as well as upgrading medical education in developing nations."

Continuing medical education, now a requirement for physicians in approximately 20 states in the U.S. to renew their medical license, is presented mostly through continuing education meetings, professional journals and video tapes or discs. Satellite-relayed video allows the most up-to-date material to be transferred to the physician avoiding the lag time of journal publications; it can be provided at a much lesser cost to the physician or institution than video tapes and discs and contributors can video-record the course, allowing the playback of programming for review. "Physicians can spend more time with their practice and less time and money travelling to continuing education courses," says Dr. O'Donnell.

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New Members

Jeffrey D. Bodin, M.D., Lake of the Ozarks General Hospital, Osage Beach 65065, has become a member of Lake of the Ozarks Medical Society, Dr. Bodkin is a native of Duluth, Minn., received his preliminary education at the University of Minnesota and his M.D. degree at the University of Minnesota in 1978. He specializes in internal medicine.

Henry N. Chionuma, M.D., 1100 County Line Rd., Kansas City, Kan. 66103, has become a member of Jackson County Medical Society. Dr. Chionuma is a native of Kamp, Nigeria, received his preliminary education at the University of Arkansas and his M.D. degree at the University of Arkansas in 1981. He specializes in internal medicine.

Joseph A. Corrado, M.D., 1000 Old Farm Rd., Mexico 65265, has become a member of Audrain County Medical Society. Dr. Corrado is a native of Everett, Mass., received his preliminary education at Boston College and his M.D. degree at St. Louis University in 1976. He specializes in general surgery.

John H. Cowan, M.D., 5500 W. 70th, Shawnee Mission, Kan. 66208, has become a member of Jackson County Medical Society. Dr. Cowan is a native of Kansas City, received his preliminary education at Tulane University and his M.D. degree at the University of Kansas in 1978. He specializes in radiology.

Jack L. Croughan, M.D., 1034 S. Brentwood, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Croughan is a native of Santa Cruz, Calif., received his preliminary education at the University of Kansas and his M.D. degree at Kansas University in 1968. He specializes in psychiatry.

Philip L. Custer, M.D., 135 W. Adams, Kirkwood 63122, has become a member of St. Louis Metropolitan Medical Society. Dr. Custer is a native of Fort Dodge, Iowa, received his preliminary education at Vanderbilt University and his M.D. degree at Vanderbilt University in 1978. He specializes in ophthalmology.

Alexander C. Davis, M.D., 6724 Troost, Suite 710, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Davis is a native of San Antonio, Tex., received his preliminary education at the University of Texas-Austin and his M.D. degree at the University of Texas-San Antonio in 1978. He specializes in internal medicine.

Octavio de Marchena, M.D., Suite 16304, Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society, Dr. de Marchena is a native of Havana, Cuba, received his preliminary education at Johns Hopkins University and his M.D. degree at Johns Hopkins University in 1976. He specializes in neurology and internal medicine.

Patrick H. Dolan, M.D., 621 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Dolan is a native of Detroit, Mich., received his preliminary education at the University of Michigan and his M.D. degree at Creighton University in 1979. He specializes in anesthesiology.

Clara E. Escuder, M.D., 8025 Dale Ave., St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Escuder is a native of the Dominican Republic, received her preliminary education at Queens College and her M.D. degree at Cornell University in 1979. She specializes in pediatrics.

John M. Holkins, M.D., Suite T509, 6420 Prospect, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Holkins is a native of Ann Arbor, Mich., received his preliminary education at Harvard University and his M.D. degree at Stanford University in 1975. He specializes in internal medicine and cardiology.

Lon C. McCroskey, M.D., Room T-503, Research Towers Building Research Medical Center, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. McCroskey is a native of Kansas City, received his preliminary education at Harvard University and his M.D. degree at the University of Kansas in 1976. He specializes in general surgery.

Michael Montgomery, M.D., Suite 415, 2929 Baltimore, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Montgomery is a native of Manhattan, Kan., received his preliminary education at Kansas State University and his M.D. degree at the University of Kansas in 1971. He specializes in cardiology and internal medicine.

Burton M. Needles, M.D., Suite 311 E., 11150 Dunn Rd., St. Louis 63136, has become a member of St. Louis Metropolitan Medical Society. Dr. Needles is a native of New York, N.Y., received his preliminary education at the City College of New York and his M.D. degree at Loyola University in 1974. He specializes in internal medicine and oncology.

Margaret Brown Nickell, M.D., 4320 Wornall Rd., Suite 520, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Nickell is a native of Madison, Wis., received her preliminary education at Kansas University and her M.D. degree at Kansas University in 1977. She specializes in obstetrics and gynecology.

Oscar A. Schwartz, M.D., 2411 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Schwartz is a native of St. Louis, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1978. He specializes in internal medicine.

Clyde N. Shealy, M.D., 1919 S. Fremont, Springfield 65804, has become a member of Greene County Medical Society. Dr. Shealy is a native of Columbia, S.C., received his preliminary education at Duke University and his M.D. degree at Duke University in 1956. He specializes in neurosurgery and rehabilitation of chronic pain.

Laurence A. Sherman, M.D., 4949 Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Sherman is a native of Cambridge, Mass., received his preliminary education at the University of Chicago and his M.D. degree at Albany Medical College in 1964. He specializes in pathology and internal medicine.

Thomas E. Shine, M.D., Suite 303, 11155 Dunn Rd., St. Louis 63136, has become a member of St. Louis Metropolitan Medical Society. Dr. Shine is a native of Gadsden, Ala., received his preliminary education at Princeton University and his M.D. degree at Washington University in 1975. He specializes in general surgery.

Barry A. Siegel, M.D., 510 S. Kingshighway Blvd., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Siegel is a native of Nashville, Tenn., received his preliminary education at Washington University

(Continued on page 721)

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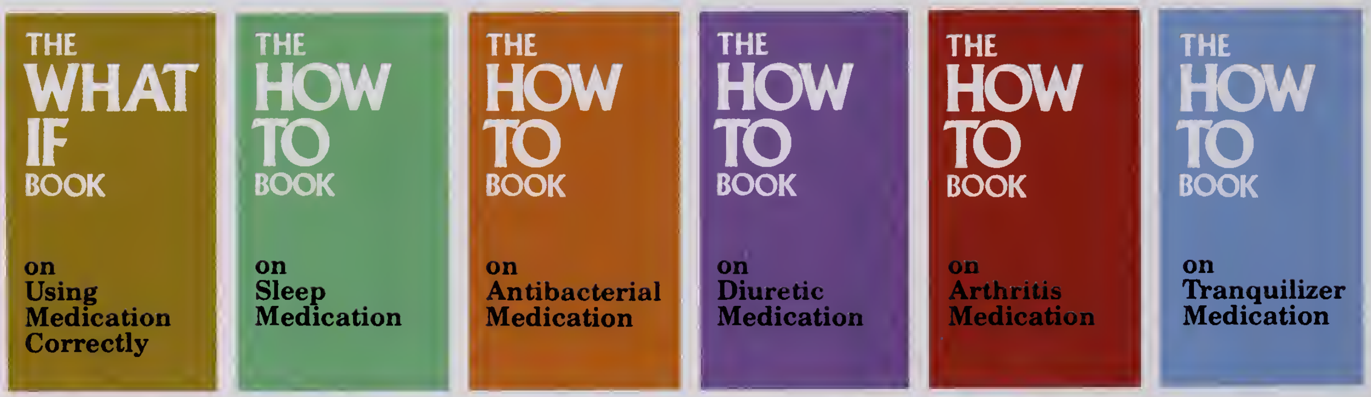

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New Members
(Continued)

and his M.D. degree at Washington University in 1969. He specializes in nuclear medicine, nuclear radiology and diagnostic radiology.

Debra S. Smithson, M.D., Box 406, Norman Dr., Malden 63863, has become a member of Cape Girardeau County Area Medical Society. Dr. Smithson is a native of Kennett, received her preliminary education at the University of Missouri-Kansas City and her M.D. degree at the University of Missouri-Kansas City in 1979. She specializes in family practice.

Alan L. Smuckler, M.D., #14 Doctor's Park, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Smuckler is a native of Milwaukee, Wis., received his preliminary education at Georgetown University and his M.D. degree at Georgetown University in 1977. He specializes in internal medicine and cardiology.

Mark R. Suenram, M.D., 225 S. Douglas, Lee's Summit 64063, has become a member of Jackson County Medical Society. Dr. Suenram is a native of Newton, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1978. He specializes in family practice.

Suzanne H. Sword, M.D., Family Medicine Center, 2900 Baltimore Building, Suite 400, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Sword is a native of New York, N.Y., received her preliminary education at Mount Holyoke College and her M.D. degree at New York Medical College in 1956. She specializes in family practice.

James J. Thomas, M.D., Suite 142, 6400 Prospect Ave., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Thomas is a native of Pittsburgh, Pa., received his preliminary education at Kent State University and his M.D. degree at the University of Pittsburgh in 1976. He specializes in anesthesiology.

Richard Trevor, M.D., Suite T-209, 6420 Prospect, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Trevor is a native of Birmingham, Ala., received his preliminary education at the University of Alabama and his M.D. degree at the University of Tennessee in 1966. He specializes in neuroradiology.

Bryan R. Troop, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Troop is a native of Fort Worth, Tex., received his preliminary education at William Jewell College and his M.D. degree at St. Louis University in 1977. He specializes in general surgery.

Mark V. Vogt, D.O., 4425 Jarboe, #5, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Vogt is a native of Nevada, received his preliminary education at the University of Missouri-Columbia and his D.O. degree at Kansas City College of Osteopathic Medicine in 1980. He specializes in internal medicine.

Barbara A. Walsh, M.D., 777 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Walsh is a native of St. Louis, received her preliminary education at the University of Missouri-Columbia and her M.D. degree at the University of Missouri-Kansas City in 1978. She specializes in obstetrics and gynecology.

David H. Weed, M.D., 10004 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Weed is a native of Columbus, Ohio, received his preliminary education at Ohio State University and his M.D. degree at Ohio State University in 1975. He specializes in pediatrics.

James R. Wessely, M.D., 525 Couch Ave., Kirkwood 63122, has become a member of St. Louis Metropolitan Medical Society. Dr. Wessely is a native of Aurora, Ill., received his preliminary education at the University of Illinois and his M.D. degree at the University of Illinois in 1978. He specializes in emergency medicine.

Calvin E. Williams, M.D., 11133 Dunn Rd., Florissant 63136, has become a member of St. Louis Metropolitan Medical Society. Dr. Williams is a native of Detroit, Mich., received his preliminary education at the University of Michigan and his M.D. degree at the University of Michigan in 1979. He specializes in anesthesiology.

John A. Woltjen, M.D., 2900 Baltimore, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Woltjen is a native of St. Louis, received his preliminary education at the University of Minnesota and his M.D. degree at the University of Missouri-Columbia in 1976. He specializes in gastroenterology.

William G. Woolery, M.D., 1718 S. Ingram, Sedalia 65301, has become a member of Pettis County Medical Society. Dr. Woolery is a native of Sedalia, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at St. Louis University in 1977. He specializes in internal medicine and pulmonary diseases.

Eugene R. Worth, M.D., Department of Anesthesiology, University of Missouri Health Sciences Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Worth is a native of Lamar, Colo., received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1979. He specializes in anesthesiology.

Keith A. Wright, M.D., 108 N. Main, Bolivar 65613, has become a member of Dallas-Hickory-Polk-Dade County Medical Society. Dr. Wright is a native of Iola, Kan., received his preliminary education at Kansas State University and his M.D. degree at Kansas University in 1979. He specializes in family practice.

Michael J. Wurm, M.D., P.O. Box 349, Maryville 64468, has become a member of Northwest Missouri Medical Society. Dr. Wurm is a native of McCook, Neb., received his preliminary education at the University of Missouri and his M.D. degree at the University of Kansas in 1973. He specializes in family practice.

New Student Members

St. Louis University

Anne Baumgardt
Gregory Robb Blair
Mark A. Daeley
Michael A. Etzel
Jeffrey S. Herman
Steven J. Judge
W. Steven Long
Linda J. MacDougall
Catherine A. Madison
Richard D. Mrad
Richard L. Parker
Dagmar A. Schnader
Daniel J. Schwarze
Erica L. Uppstrom
Patricia A. Webster

University of Missouri-Columbia

Maureen E. Dempsey
Bonnie M. Ensign
Tibor C. Kopjas
Daniel P. Krontz
William D. Musick
Gary S. Nadolski
Paul D. Rottler
Daniel G. Sohn
Howard M. Soloman
James A. Stokes

University of Missouri-Kansas City

Doug B. Aach
James R. Batterson, Jr.
Susan Blanchard
Donna Jean Boone
Cheryl L. Brown
Craig Elliot Brown
Steven E. Buie
Becky Ann Burchett
Elizabeth A. Clark
Donald E. Cole
Robert H. Collins
Shavonne L. Danner
Karen L. Epperson
Beverly D. Graves
Leland Graves
Paul B. Griggs
Ann I. Hellerstein
Deborah L. Hurley
Thomas F. Jones, III
James D. Kapland
Marcia A. Kielhofner
Dwight C. Look, III
Debbie M. Mitchell
Karen A. Myers
Mary C. Pitcher
Skip Sallee
David Matthew Smid
Barbara J. Stegmann
Jana L. Turner
Kim C. Wade
Mark S. Wasserman
John A. Whitfield, Jr.
Vicki Rene Wilson
Mark A. Yap

Washington University

Randy M. Ennen
Roberta L. Loeffler
Justin B. Starren
William L. Woods

In Memoriam

Arthur L. Stockwell, M.D., 8104 Pennsylvania, Kansas City 64114; graduate of Washington University, 1928; member of Jackson County Medical Society; aged 79; died July 18, 1982.

Harry G. Moore, Sr., M.D., 245 Union Blvd., Apt. 221, St. Louis 63108; graduate of St. Louis University, 1929; member of St. Louis Metropolitan Medical Society; aged 78; died Aug. 10, 1982.

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References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics,* 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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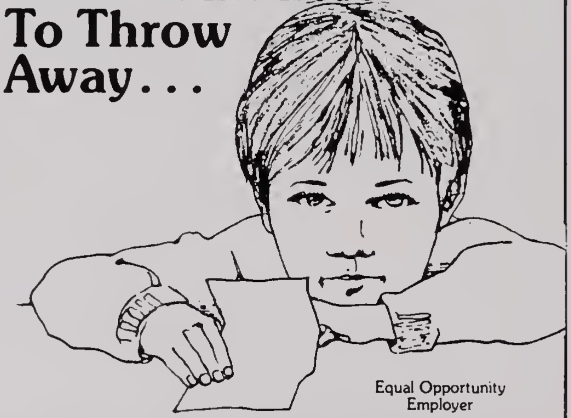

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in Brief

A summary of AMA, medical & health news

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AN AGENDA PROCESS for developing a health policy for the American people was launched with the convocation of an 18-member Steering Committee representing medicine, government and industry. The AMA's decision to initiate the process arose from a need to replace the piecemeal approach to policy making with a broad-based conceptual and philosophical framework for approaching the particular social, economic, scientific, educational, and political circumstances that evolve from year to year. Six work groups will be named to identify basic principles in six primary policy areas: medical science; education; health resources; delivery mechanisms; evaluation, assessment and control; and payment for services. An Advisory Committee representing more than 80 organizations will be appointed to review the efforts of the work groups. The Steering Committee will release its findings and recommendations to the participating organizations. Each organization will then prepare its own policy in response to those proposals. Heading the Steering Committee is Joseph F. Boyle, M.D. chairman of the AMA Board of Trustees.

"MARKETING STRATEGIES for Private Practice," a new workshop for physicians, will be offered at AMA Headquarters on November 5, December 10, and January 28, 1983. The session includes an update on health care trends, improving referral patterns, enhancing patient satisfaction, and development of a coordinated marketing plan for solo physicians and small groups. Fees are $150 for members and $185 for nonmembers. Sessions are limited to 30 registrants. For a brochure describing the course, contact the Department of Practice Management, AMA Headquarters.

THE AMERICAN MEDICAL Political Action Committee has budgeted about $350,000 for independent expenditures during the 1982 elections, AMPAC told a Congressional committee task force. The money will be spent on TV-radio spots and direct mail. AMPAC told the task force that independent expenditures for candidates involve the exercise of the right to free speech in a political campaign and should be encouraged. Independent expenditures are contributions or activities made on behalf of candidates without the knowledge of the candidates. During the 1980 elections, AMPAC spent $170,000 on TV spots for seven candidates and direct mail for another seven.

THE AMA HAS REORGANIZED its educational and scientific activities to provide increased emphasis on the development of policy, information services, medical education, health maintenance by the public, and technology assessment. The Division of Educational Standards and Evaluation and the Division of Educational Policy and Development have been merged into a single Division of Medical Education headed by Richard L. Egan, M.D. Richard J. Jones, M.D., directs a new Division of Scientific Analysis and Technology. Philip L. White, Sc.D., directs a new Division of Personal and Public Health Policy, which includes activities in health education, mental health, nutrition, and public and environmental health. The Division of Drugs, directed by John C. Ballin, Ph.D., was not affected by the reorganization.

THE AMA SUPPORTED a proposal to modify the requirements for certifying hospitals, skilled nursing facilities, intermediate care facilities, and home health agencies that provide services to Medicare and Medicaid beneficiaries. In a letter to the Health Care Financing Administration, the AMA said the proposal would eliminate "bureaucratic red tape" and provide more flexible options for state agencies while at the same time assuring that patients receive high quality care.

THE AMA AUXILIARY is helping the National Office of Disability expand its network of community programs designed to improve the quality of life for disabled individuals. The network of Community Partnership Programs is composed of disabled and non-disabled volunteers working for legislative changes, new social and training programs, and greater community involvement of the disabled. For more information, contact the AMA Auxiliary, AMA Headquarters.

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- Measured against post-episiotomy pain in 30 patients, "ibuprofen was effective in treating the swelling as well as pain…during the first and worst days. Therefore, it is not only the analgesic but also the anti-inflammatory effect of ibuprofen that are the beneficial factors…"[4]

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References:
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2. Rondeau PL, Yeung E, Nelson P: Canad Dent Assoc J 46:433-439, 1980.
3. Selwyn P and Giles AD: Br Jrl of Clin Practice, Supplement 6, Safe and effective analgesia following dental surgery: A comparison of brufen and distalgesic. Pg 87-90. 1980.
4. Taina E: Curr Med Res Opinion, 7:423-428, 1981.

Boots Pharmaceuticals, Inc.
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Pioneers in medicine for the family

RUFEN®
ibuprofen
Each tablet contains
IBUPROFEN 400 mg
100 TABLETS
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The Boots Company Ltd
Nottingham England
Boots Pharmaceuticals, Inc.

And Rufen® Measures Up Best

RUFEN® (ibuprofen) Tablets

INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

CAUTION: Federal law prohibits dispensing without prescription.

RF-077 8/82 Printed in U.S.A.

Bactrim™
(trimethoprim and sulfamethoxazole/Roche)
# succeeds

Bactrim is useful for the following infections when due to susceptible strains of indicated organisms (see indications section in summary of product information):

Expanding its usefulness in antimicrobial therapy

in recurrent UTI... a continuing record of high clinical effectiveness against common uropathogens

in acute otitis media in children... effective against both major otic pathogens...with *b.i.d.* convenience

in acute exacerbations of chronic bronchitis in adults... clears the sputum and lowers its volume...on *b.i.d.* dosage

in shigellosis... faster relief of diarrhea than with ampicillin[2]

BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note.* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For acute exacerbations of chronic bronchitis in adults due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over a single antimicrobial agent.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; patients with documented megaloblastic anemia due to folate deficiency; pregnancy at term; nursing mothers because sulfonamides are excreted in human milk and may cause kernicterus; infants less than 2 months of age

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Because trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefits justify the potential risk to the fetus.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

For patients with renal impairment: Use recommended dosage regimen when creatinine clearance is above 30 ml/min. If creatinine clearance is between 15 and 30 ml/min, use one-half the usual regimen. Bactrim is not recommended if creatinine clearance is below 15 ml/min.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS:

Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS:

Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100, Tel-E-Dose® packages of 100; Prescription Paks of 20 and 28. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 40. *Pediatric Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); cherry flavored—bottles of 100 ml and 16 oz (1 pint). *Suspension*, containing 40 mg trimethoprim and 200 mg sulfamethoxazole per teaspoonful (5 ml); fruit-licorice flavored—bottles of 16 oz (1 pint).

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Bactrim™ DS
160 mg trimethoprim and 800 mg sulfamethoxazole
DOUBLE STRENGTH TABLETS

Bactrim continues to demonstrate high clinical effectiveness in recurrent urinary tract infections. Bactrim reaches effective levels in urine, serum, and renal tissue[1]...the trimethoprim component diffuses into vaginal secretions in bactericidal concentrations[1]... and in the fecal flora, Bactrim effectively suppresses Enterobacteriaceae[1,2] with little resulting emergence of resistant organisms.

1. Rubin RH, Swartz MN: *N Engl J Med 303*:426-432, Aug 21, 1980. 2. Data on file, Medical Department, Hoffmann-La Roche Inc.

maximizes results with B.I.D. convenience

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* due to susceptible strains of indicated organisms

Please see previous page for summary of product information.

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Missouri Medicine

Vol. 79, No. 11 November, 1982

Nine Years' Experience with Total Hip Replacement

Isoflurane: Clinical Experiences

Case Reports

President's Message

Carcinoma of the Uterine Fundus

Review of 70 Cases

Clemastine Fumarate for Symptomatic Relief of Allergic Rhinitis

Editor's Corner

MISSOURI STATE MEDICAL ASSOCIATION

MDCCCL

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NEWS NEWS NEWS NEWS Round Up

November, 1982

HHS urged to extend comment time on proposed rule

Richard S. Schweiker, secretary of the Health and Human Services Dept., has been urged to extend the comment period on a proposed rule dealing with the Payment for Physician Services Furnished in Institutional Providers of Services.

MSMA President John I. Matthews, M.D., asked Schweiker to extend the comment period to 90 days, instead of the previous 30 days. This would give Missouri physicians an opportunity to extensively study the many implications of this rule.

The Health Care Financing Administration published the proposed rule on October 1, 1982 in the *Federal Register*. The proposed rule is aimed at implementing a section of the newly enacted Tax Equity and Fiscal Responsibility Act of 1982.

This section directs the Secretary of HHS, by regulation, to determine criteria for distinguishing those physician services rendered in a hospital or skilled nursing facility which are to be reimbursable under Part B of the Medicare Program and those services which are to be reimbursable under Part A of the Medicare Program.

These regulations will apply to all services a physician furnishes in a hospital or skilled nursing facility. The notice indicates that at a later time these regulations "may also be applied . . . in other provider settings, such as comprehensive outpatient rehabilitative facilities."

Specifically, the purpose of the proposed rule is to set absolute limits on the reasonable and allowable compensation recognized by Medicare for hospital-based physicians compensated through the hospital. Percentage of revenue contracts are the primary target of these regulations; radiologists, pathologists and anesthesiologists will be affected.

Worley elected to AAFP Board

Last month, Charles Worley, M.D., of Sweet Springs, was elected to the Board of Directors of the American Academy of Family Physicians. The Sweet Springs family physician will serve three years on the Board

Dr. Worley is an MSMA member and a member of the Pettis County Medical Society.

Physicians fees up 0.5% in Aug.

The physicians' fee component of the consumer price index increased by 0.5% in August, according to data from the U.S. Bureau of Labor Statistics.

The increase was greater than the percentage increase in the CPI's all-items component (0.2%) but was less than the increase in the all-services component (0.6%).

The August CPI data also showed that the medical care price index rose by 1.0%, and the hospital room charge index rose by 1.4%.

The CPI figures for the 12-month period ending in August showed that physicians' services increased by 9.2%.

Avis offers express service

Now MSMA members can save time, as well as money, on Avis car rentals. In addition to regular car rental discounts, Avis now offers "Avis Express."

By obtaining an Avis "wizard number," MSMA members can save time when they make their car reservations in advance. Avis Express applications are available through MSMA headquarters.

With an application form, MSMA members will receive a gift coupon. At major airport locations, Avis will give members a free travel bag (a $20 value) when they rent a compact car or larger and present their gift coupon. Coupons may be collected and used on other gifts. Offer is good through December 31, 1982.

For an Avis Express application or for more information, contact MSMA, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

M.D. surplus noted by a number of physicians

Competition for patients is increasing among U.S. physicians and is affecting medical practice, according to a survey of 1,000 physicians conducted by the AMA Group on Public and Federation Relations. Some 72% of respondents said they believed there is a surplus of physicians in certain specialties in their communities, with surgery heading the list.

An increasing number said there are too many physicians in their communities (40% this year, compared with 33% in 1981). Physicians reported major increases in competition from hospital outpatient clinics. About 30% of the respondents said they made house calls and almost 60% said other physicians in their communities did so.

Fewer than half of the respondents said their patient loads were increasing and only one-third reported that their incomes were increasing. "These trends are undoubtedly amplified by the general economic climate and the large numbers of new physicians continuing to graduate from medical school," said the survey, published in the AMA's "Survey and Opinion Briefs."

The rising unemployment rate is reducing patient loads for 39% of the physicians surveyed and is creating a major increase in collection problems for 67%. Collection problems were worse for some than for others. Some 16% of the physicians reported that 25% or more of their bills were uncollected. On average, 14% of all medical bills were reported uncollected.

Physicians' real income drops 5.75% since '70

The American Medical Association recently released the results of a survey showing, among other things, that the average physician's real income has decreased since 1970.

The first annual core survey was conducted by the Socioeconomic Monitoring System (SMS) of the AMA's Center for Health Policy Research. The survey reported results on such matters as earnings and expenses by specialty and by region and net income of physicians relative to inflation and expressed in 1970 dollars.

The survey reported average net income for all specialties and regions of $93,000 in 1981. This was an increase of 126.8% over the $41,800 average of 1970. However, using 1970 as a base year and accounting for inflation, physicians' earnings decreased by 5.75%, to $39,400 in 1970 dollars.

The West North Central census division, which includes Missouri, had an average net income of $87,400. Among top salaries, the Missouri region ranked seventh within the nine survey regions.

The survey's figures showed surgeons and anestheosiologists tying for the greatest average net income by specialty, $118,600. Radiologist earned only slightly less with a $116,900 average income while pediatricians ranked last with an average income of $65,100.

Obstetricians and gynecologists listed the highest office expenses with a figure of $99,600 while psychiatrists paid only $28,000 in average yearly expenses. The average for all physicians was $74,000.

The largest item on the list of office expenditures was personnel costs, which accounted for about 30% of total expenses.

The survey was conducted through interviews with 3,818 physicians. The sample was comprised of all specialties and was restricted to doctors in private practice. Residents were excluded.

Members can save 14% on IBM typewriters

IBM Corp. is now offering MSMA members a special discount on IBM electronic typewriters. If MSMA receives 50 or more typewriter orders, members will receive a 14% discount on each typewriter ordered.

Members need to place their orders by December 1982, so that they can take advantage of 1982 investment tax credits and 1982 depreciation tax deductions.

Members can choose from the following typewriters models: IBM Correcting Selectric III — Model 6705 with a 15.5 inch carriage, $890 (retail — $1,035); IBM Model 75 Electronic Typewriter with a 10-page storage capacity, $1,677 (retail — $1,950); and IBM Selectric III Model 6701, single pitch 13.5 inch carriage without correcting feature, $725.34 (retail — $810).

To receive a discount, MSMA members must send their checks to MSMA by December 1982. Typewriters will be shipped from IBM directly to members.

Members who are interested in one of more typewriters for their home or office, should mail the attached coupon to MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Yes, I would like to receive a 14% discount on an IBM electronic typewriter. Please order ____________________ for me.

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Two winter southsea cruises offered to MSMA members

Two southsea cruises will brighten the winter season for MSMA members. Both tours are being conducted by INTRAV and feature medical education seminars.

The West Indies Cruise, February 26-March 5, 1983, offers travel to Ft. Lauderdale, San Juan, St. Thomas and St. Maarten. On this trip, members can enjoy the nightlife in Puerto Rico's capital, San Juan, plus they can spend a full day of shopping and touring in each of the habor towns of St. Thomas and St. Maarten.

A second trip, the Caribbean Cruise, leaves St. Louis and Kansas City on March 16 and returns March 26, 1983. This trip offers members travel to Ft. Lauderdale, St. Thomas, Antigua, Martinique, Barbados and St. John.

In conjunction with these cruises, Continuing Medical Education Seminars will be conducted for credit in Category II.

For more information on either trip, contact the Missouri State Medical Association, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

PR Update

During the past five months, MSMA's television public service announcements have received over $65,000 in complimentary air time. Distributed in May, the three 30-second announcements focused on teenage smoking, adult alcohol abuse and health care costs containment.

Missouri's television stations indicated their use of MSMA's PSAs on a survey form, which was sent to them in September. Several stations requested extra copies of the PSA, since their original tapes were worn out or lost.

Currently, MSMA's Commission on Public Affairs is previewing new television announcements and hopes to distribute them next spring.

MSMA has lowest dues

Soon all MSMA members will receive a statement for their component society, MSMA and AMA annual dues. In April, the MSMA House of Delegates voted to increase dues by $10, making dues now $135 (including a $10 assessment for medical student loan foundation). Even with that increase, the MSMA still has the lowest state medical society membership dues in the nation.

Included in the dues statement is a Key Contact questionnaire. The MSMA is trying to build a network of members who would be willing to keep their state Representatives and Senators informed about organized medicine's view on bills before the Legislature. Physicians who are personally acquainted with a legislator or who have a legislator as a patient are especially encouraged to become active as a Key Contact.

For more information on dues or on the Key Contact program, contact MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

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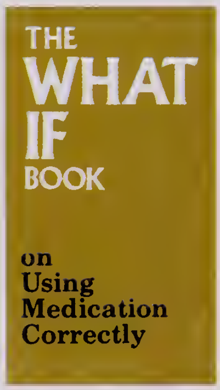
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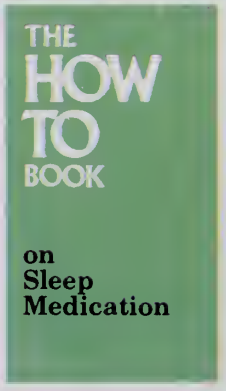
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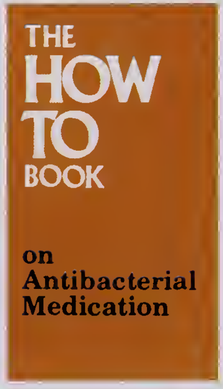
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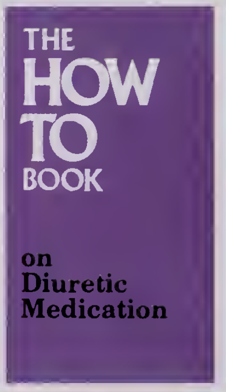
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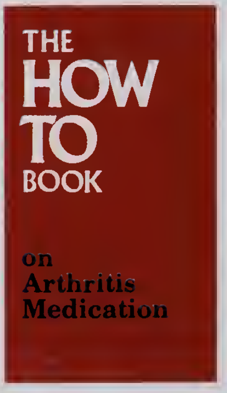
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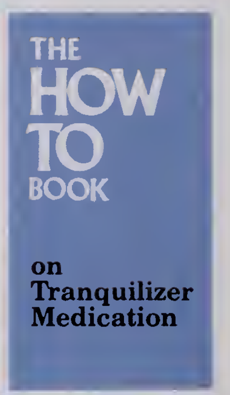
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(ibuprofen)

measures up... at a reasonable cost!

A Single-Entity Pain Reliever As-Good-As or Better-Than Codeine Combinations

"...particularly effective in soft tissue disorders including sports injuries,"[1] Rufen stops pain at the site of injury and inflammation, not at the level of central perception. There is no dulled sensorium, no special need for warnings about driving or cautions about use of machinery. Your patient gets fast, effective pain relief...potent anti-inflammatory action...excellent tolerance...*plus* the exceptional economy that only Rufen offers. Next time one of your patients asks for pain relief, let Rufen show you how it measures up.

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Pioneers in medicine for the family

See next page for brief summary of prescribing information.

Measure RUFEN® (ibuprofen) against "standard" mild to moderate pain

Dental pain and episiotomy pain are predictable, reproducible "standards" that make possible objective comparisons of effectiveness of different analgesic agents.

- Measured against 15, 30 and 60 mg doses of codeine phosphate in a double-blind study of 287 patients, 400-mg doses of ibuprofen proved "significantly better than codeine on almost all pain intensity, degree of relief and duration of analgesia parameters."[2]
- Measured against a propoxyphene-acetaminophen combination for pain relief after 3rd molar extractions, ibuprofen proved equally effective and caused fewer side effects. Ibuprofen was associated with faster recovery, evidenced by more rapid reduction of trismus and return to normal function.[3]
- Measured against post-episiotomy pain in 30 patients, "ibuprofen was effective in treating the swelling as well as pain...during the first and worst days. Therefore, it is not only the analgesic but also the anti-inflammatory effect of ibuprofen that are the beneficial factors..."[4]

Measure RUFEN® (ibuprofen) against any mild to moderate pain

RUFEN	Acetaminophen + codeine combinations
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References:
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4. Taina E: Curr Med Res Opinion, 7:423-428, 1981.

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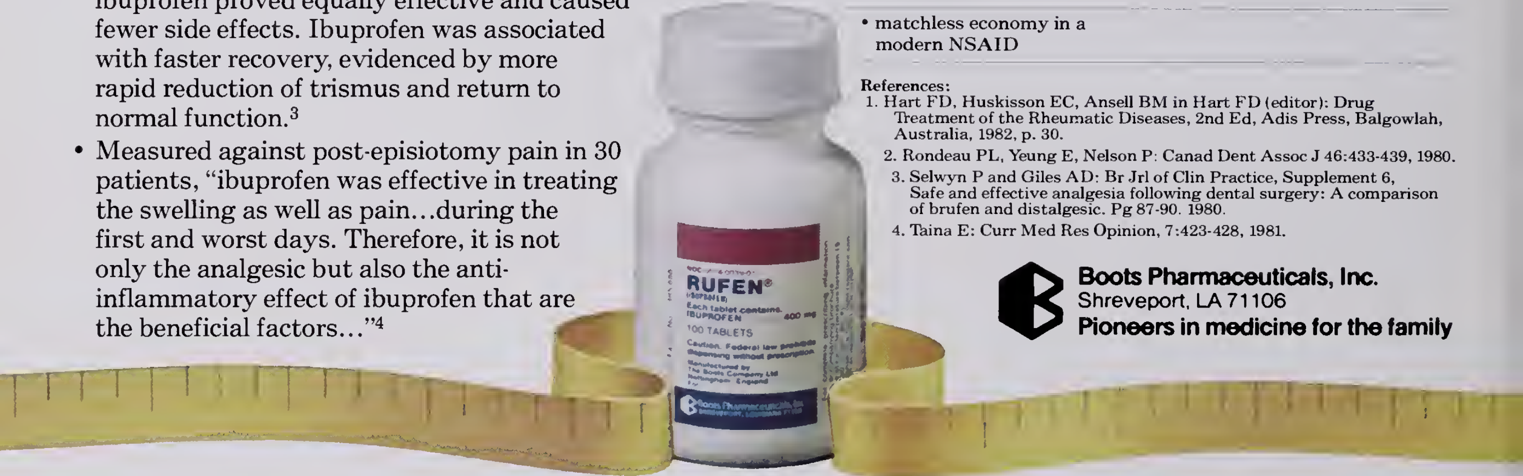
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INDICATIONS AND USAGE: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in the long-term management of these diseases. Safety and effectiveness have not been established for Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain. Treatment of primary dysmenorrhea.

CONTRAINDICATIONS: Patients hypersensitive to ibuprofen, or with the syndrome of nasal polyps, angio-edema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory drugs (see WARNINGS).

WARNINGS: Anaphylactoid reactions have occurred in patients hypersensitive to aspirin (see CONTRAINDICATIONS). Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Peptic ulceration, perforation, or gastrointestinal bleeding can end fatally, however, an association has not been established. Rufen should be given under close supervision to patients with a history of upper gastrointestinal tract disease, and only after consulting the ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be attempted. If Rufen must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

PRECAUTIONS: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If developed, discontinue Rufen and administer an ophthalmologic examination.

Fluid retention and edema have been associated with Rufen; caution should be used in patients with a history of cardiac decompensation.

Rufen can inhibit platelet aggregation and prolong bleeding time. Use with caution in patients with intrinsic coagulation defects and those taking anticoagulants.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy, this therapy should be tapered slowly when adding Rufen.

DRUG INTERACTION: *Coumarin-type anticoagulants.* The physician should be cautious when administering Rufen to patients on anticoagulants.

Aspirin. Concomitant use may decrease Rufen blood levels.

PREGNANCY AND NURSING MOTHERS: Rufen should not be taken during pregnancy nor by nursing mothers.

ADVERSE REACTIONS: Incidence greater than 1%. Gastrointestinal: The most frequent adverse reaction is gastrointestinal (4 to 16%). Includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of GI tract (bloating and flatulence). Central Nervous System: dizziness*, headache, nervousness. Dermatologic: rash* (including maculopapular type), pruritus. Special Senses: tinnitus. Metabolic: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS). *Incidence 3% to 9%.

Incidence less than 1 in 100. Gastrointestinal: gastric or duodenal ulcer with bleeding and/or perforation, hemorrhage, melena. Central Nervous System: depression, insomnia, confusion, emotional lability, somnolence, aseptic meningitis with fever and coma. Dermatologic: vesiculobullous eruptions, urticaria, erythema multiforme, Stevens-Johnson syndrome and alopecia. *Special Senses:* hearing loss, amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision) [see PRECAUTIONS]. Hematologic: neutropenia, agranulocytosis, aplastic anemia, hemolytic anemia (sometimes Coombs' positive), thrombocytopenia with or without purpura eosinophilia, decreases in hemoglobin and hematocrit. Cardiovascular: congestive heart failure in patients with marginal cardiac function, elevated blood pressure. Allergic: syndrome of abdominal pain, fever, chills, nausea and vomiting, anaphylaxis, bronchospasms (see CONTRAINDICATIONS). Renal: acute renal failure in patients with preexisting significantly impaired renal function, decreased creatinine clearance, polyuria, azotemia, cystitis, hematuria. Miscellaneous: dry eyes and mouth, gingival ulcers, rhinitis.

Causal relationship unknown. Gastrointestinal: pancreatitis. Central Nervous System: paresthesias, hallucinations, dream abnormalities, pseudotumor cerebri. Dermatologic: toxic epidermal necrolysis, photoallergic skin reactions. Special Senses: conjunctivitis, diplopia, optic neuritis. Hematologic: bleeding episodes. Allergic: serum sickness, lupus erythematosus syndrome, Henoch-Schonlein vasculitis. Endocrine: gynecomastia, hypoglycemia. Cardiovascular: arrhythmias (sinus tachycardia, bradycardia, and palpitations). Renal: renal papillary necrosis.

OVERDOSAGE: Acute overdosage, the stomach should be emptied. Rufen is acidic and excreted in the urine, alkaline diuresis may benefit.

DOSAGE AND ADMINISTRATION: Rheumatoid arthritis and osteoarthritis, including flareups of chronic disease: Suggested dosage 400 mg t.i.d. or q.i.d.

Dysmenorrhea: 400 mg every 4 hours as necessary.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for the relief of pain. *Do not exceed 2,400 mg per day.*

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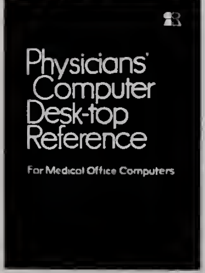
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Indications and Usage: Anusol-HC Suppositories and Anusol-HC Cream are adjunctive therapy for the symptomatic relief of pain, itching and discomfort in external and internal hemorrhoids, proctitis, papillitis, cryptitis, and fissures, incomplete fistulas, pruritus ani and relief of local pain and discomfort following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. After acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

CONTRAINDICATIONS

Anusol-HC Suppositories and Anusol-HC Cream are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparations.

WARNINGS

The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy, they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

PRECAUTIONS

General

Symptomatic relief should not delay definitive diagnoses or treatment.

Prolonged or excessive use of corticosteroids might produce systemic effects.

If irritation develops, Anusol-HC Suppositories and Anusol-HC Cream should be discontinued and appropriate therapy instituted.

In the presence of an infection the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Anusol-HC is not for ophthalmic use.

Pregnancy

See "WARNINGS"

Pediatric Use

Care should be taken when using the corticosteroid hydrocortisone acetate in children and infants.

DOSAGE AND ADMINISTRATION

Anusol-HC Suppositories—Adults: Remove foil wrapper and insert suppository into the anus. Insert one suppository in the morning and one at bedtime for 3 to 6 days or until inflammation subsides. Then maintain comfort with regular Anusol Suppositories.

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CONTRAINDICATIONS

1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e *g* , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes. A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory* bronchospasm. *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

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Editor's Corner

The increasing cost of hospital care in the United States does at least benefit one group of people — the political pundits and editorial writers have another subject on which they are instant experts. We have one quarrel with all the verbiage that has been printed. The major emphasis on hospital cost control seems to relate to the role of the physician in the problem. Duplication of laboratory tests, changing orders after medications have been prepared and ordering STAT tests unnecessarily were listed as examples of how doctors cause a "major waste" in a recent editorial in a national medicine magazine.

Admittedly, the physician is a key figure in many cost factors. The need to use some of the newer, more expensive drugs only when definitely indicated has to be continually emphasized, as does the concept of doing all possible evaluations on an outpatient basis. Here the doctor is often faced by the demands of patients paying high hospital insurance premiums to be inpatients for their medical care. Some better understanding and definition of the problem need to be faced by the public and the insurance carriers. The expensive Intensive Care Units have been a mixed blessing. On the positive side, they provide highly specialized care in critical situations. On the other hand, the cost is becoming enormous, even considering that nurses are still underpaid according to their training and responsibilities.

All the above factors have been reported and emphasized at length with the implication that they constitute the main reasons hospital costs are high. Physicians themselves have written some sniveling articles taking on most of the guilt for the financial problem.

It would seem to us that this is simply not true and that factors under control of the physicians are being blamed to a disproportionate degree. Inflation itself is a major item. Wages of skilled personnel in the hospital realm have gone up and up. Meeting legal and governmental standards, which usually have no recognizable relationship to medical standards, are cost factors. Hospitals are also bureaucracies with an apparent inborn need to expand. Their recent diversifications into the paramedical and public relation fields in the name of health have to be funded out of the hospital budget and, at times, seem to be hard to defend from a financial standpoint. The primary physician "factor" would seem to be the cost effectiveness of the newer medical modalities in our hospitals, and this is a subject which is going to have to be faced. The time has already come when marginal gains in patient health and longevity by technically available but too expensive means are going to have to be denied. The public needs to be better informed as to the nature of these problems so they can help decide how expensive a health care they believe they can afford.

Not long ago, a relative of ours had a short hospital stay during which he took no medication. Included on the hospital bill was a charge of $5.00 "for medication." When he asked the business office about the apparent error, he was told that the doctor had ordered a sleeping pill, if needed, and it was his fault he had not taken it. It seems that at least one way to save $5.00 might have been found.

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Nine Years' Experience With Total Hip Replacement

Between December, 1971 and December, 1980, 324 total hip replacements were performed at the St. Joseph Hospital in Kirkwood, Mo. Two prosthetic systems were utilized — the Charnley-Muller and, later, the Richards Series II prosthesis. Both were supplemented with methylmethacrylate. These procedures have been made possible by many past masters in the art of total hip replacement.

During the developmental years, Mr. John Charnley of England and Dr. Maurice Muller of Switzerland were prominent. Some of the St. Joseph Hospital surgeons have had the privilege of observing Dr. Muller. They follow his technique with the modifications of increasing knowledge and experience. This increasing knowledge has been considerable in the streamlining of operative procedure as well as in postoperative management.

Table 1 delineates the type of patients and demonstrates the sex and age at operation. Bilateral procedures were performed at two or three week intervals or several months to years between procedures as symptoms dictated. Our earliest cases were usually limited to patients over the age of 60 with advanced disease. As our experience broadened and our technique improved, however, younger patients were benefitted by this procedure.

Table 1 also demonstrates the clinical material (number of hips reviewed, unilateral disease, bilateral disease, bilateral operations).

Two types of prosthesis have been used in our series. The Muller assembly was used in 209 cases and the Series II Richards prosthesis in 115. Both prostheses have acetabular cups made of a high density polyethylene plastic socket 5 mm thick with a 32 mm femoral head. There is a difference in the angle and shape of the neck and stems of each prosthesis.

We have been accustomed to an easy and direct access to the hip joint through the modified Watson-Jones surgical approach.[1] With the greater trochanter not divided, there is less bleeding and a faster closure is possible. This allows for earlier ambulation and there is a lower morbidity rate. Wire breakage, migration and non-union of the trochanter are also avoided. The variety of neck lengths has been a decided advantage, since it provides exceptionable flexibility in the restoration of proper abduction muscle tension and lateral lever arm as well as a greater possibility of restoration of leg length.

The basic program involves a thorough evaluation from an orthopedic standpoint. The patient is

TABLE 1
DECEMBER, 1971 THRU DECEMBER, 1980

Unilateral Disease	280	
Bilateral Disease	22	(44 Hips)
Total	324	
Sex	*Average Age*	
Men	56 years	
Women	67 years	

Total hip replacement has become an accepted mode of treatment for most instances of advanced degenerating disease of the hip joint. This series illustrates how the combined experience of a community hospital's surgical team has achieved encouraging results during a nine-year period.

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completely appraised of the advantages and disadvantages of the operative procedure and its complications. Almost all of these patients have been under medical care. Following this discussion, the patients are admitted one or two days prior to the day of operation in order to allow the patient to be seen by his physician or a medical consultant to determine if he is a satisfactory candidate for the procedure.

During that period of time, the patient is also evaluated by the physical therapy department and a thorough explanation of the postoperative program is outlined. Frequently, the patient receives a demonstration of spirometry or intermittent positive pressure since this is frequently necessary for two or three days postoperatively.

Almost all of the patients receive a pre- and postoperative prophylactic mini-dose heparinization of either 5,000 units subcutaneously twice a day or 2,500 units every six hours.[2] Immediately prior to surgery, the patient receives an intravenous cephalosporin. This is continued for three to seven days postoperatively and then is followed by the oral drug as a prophylactic antibiotic.

TABLE 2

STATISTICS — TOTAL HIP REPLACEMENT STUDY

Length of Stay Statistics by Years

Year	Total Procedures	Average LOS	Lowest Stay	Mode Stay	Highest Stay
1971	1	21.0	21.0	21.0	21.0
1972	25	22.7	13.0	14.0	45.0
1973	17	20.6	11.0	13 & 17	41.0
1974	43	18.6	6.0	13.0	54.0
1975	33	17.8	7.0	12.0	33.0
1976	40	19.9	9.0	16.0	54.0
1977	33	22.2	11.0	16 & 18	56.0
1978	49	17.8	6.0	12.0	50.0
1979	34	19.3	10.0	11.0	81.0
1980	49	16.9	9.0	12.0	44.0

The operative procedure is performed with the patient in the supine position following the technique of Muller.[1] Modifying his technique, a plug of cement is placed in a position just distal to the tip of the prosthesis.[3] Next, a portion of cement is mixed. Although it was originally inserted with the fingers, a caulking gun is now utilized to insert the cement in a more liquid state.[4] The presence of the cement plug eliminates cement drift further down the shaft. The prosthesis is then inserted and either the hip is reduced or the prosthesis is held in place until the cement has hardened before reduction. This stage of the operation is quite critical because of the absorption of the methylmethacrylate monomer into the venous system.

It has been learned that if the patient is in a hypovolemic state, there is a rather precipitous drop in the patient's blood pressure. In order to combat this possibility, the blood volume is maintained with at least 1 unit of blood or a liter of isotonic solution prior to this stage of the procedure.[5] The wound is then closed over hemovac drains.

The patient is usually kept in bed for a day and then allowed to sit in a chair. The physical therapist visits the patient on the day after surgery to start isometric exercises. Usually on the third postoperative day, the physical therapy department commences exercises and gait training. Depending on the surgeon's orders, the patient will either walk with a cane or a walker bearing anywhere from half to full weight during the first six weeks following surgery. The usual postoperative hospital stay is in the range of 12 to 15 days.

Initially, the average blood replacement during the operation and postoperative period was 4 units. At the present time, this average is approximately 2 units. Originally, the operative time was three hours. It has now been reduced to two hours (Table 2).

The diagnostic classification is presented in Table 3.

Discussing the most serious complications first (Table 4), it is noted that four deaths (1.23%) are noted in our series of 324 cases. Major surgery in a group of patients with an average age of 61 carries with it the inevitable mortality, and total hip replacement is no exception.

One death during a Series II total hip replacement occurred in a woman who was 92 years old and had a complicated problem of a refracture and disruption of a previously repaired intertrochanteric fracture. This necessitated long and difficult

TABLE 3
DIAGNOSTIC CLASSIFICATION 324 CASES

Primary Degenerative Arthritis	203
Replacement of Other Appliances	40
Aseptic Necrosis	29
Rheumatoid Arthritis	20
Traumatic Arthritis	10
Subcapital Fracture	7
Failed Hip Arthrodesis (Fusion)	4
Dysplasia Degeneration	4
Healed Septic Arthritis	3
Pathologic Fracture	1
Osteogenic Sarcoma	1
Tuberculosis	1
Legg Perthes Disease	1

TABLE 4
MAJOR COMPLICATIONS TOTAL — 324 CASES
(317 WERE ANTICOAGULATED)

				Percent
Pulmonary Embolism (anticoagulated)	5	(1 fatal)		1.8
Pulmonary Embolism (not anticoagulated)	1			.3
Deep Vein Thrombosis	4	(1 fatal)		1.3
Deep Vein Thrombosis (not anticoagulated)	1			.3
Deep Infections	4	(1 acute/ 3 delayed)		1.0
Dislocations	5	(3 CM/2 Series II)		1.5
Loose Prosthesis (symptomatic)	20	Stem 18) 4 years Socket 2) average		5.8
Hematoma Elsewhere	2	Liver	1	.5
		Abdominal wall	1	
Hematoma Wound	1			.2
Ectopic Bone	2			.5
Myocardial Infarction	2			.5
Total Deaths	4	Men	2	1.0
		Women	2	
	55			14.7

surgery of 3½ hours with considerable bleeding that required 7 units of whole blood. Any reparative operation in this individual carried a great risk, but it was her only hope for survival.

A 70-year-old man, who underwent a Charnley-Muller total hip replacement, died on the first postoperative day. This patient was obese, had hepatic cirrhosis and had been bedridden for four months prior to surgery. A recent pulmonary embolus and multiple preoperative emboli were found at autopsy. In a similar situation now, a preoperative lung scan would be advisable. This patient had received mini-dose heparin pre- and postoperatively.

The third patient was a 63-year-old man who received a Charnley-Muller prosthesis and who had an uneventful, rapidly rehabilitative course. He had a myocardial infarction on his eighth postoperative day. He then had at least two more infarctions and died on the 31st postoperative day. He had received mini-dose heparinization.

This patient had a history of myocardial infarction without sequelae several years earlier. The surgery was performed under controlled hypotension with minimal blood loss requiring no transfusions. The preoperative hemoglobin level was 14.4 gm/100 ml and at the time of the infarction was 12 gm/100 ml. The history of coronary heart disease brings up the question of whether standard anesthesia techniques should be the choice except in young, healthy individuals. In this particular case, however, the myocardial infarction did not occur in the immediate postoperative period as one might expect if causally related to hypotensive anesthesia.

The fourth patient was a 56-year-old woman with osteoarthritis who had a Series II hip replacement. She received 3 units of blood during the operation. She did receive antibiotics but was not anticoagulated. On the 11th day she died, either of a myocardial infarction or a pulmonary embolus.

Deep vein thrombosis and pulmonary embolus are major complications. Deep vein thrombosis is prophylactically managed by the application of antiembolism stockings, instruction by the physical therapy department in calf pumping and other exercises pre- and postoperatively, deep breathing instruction and intermittent positive pressure equipment, and a general education in the protection. No anticoagulation program is universally accepted as the best. The programs followed here have been prophylactic aspirin in a minority of cases with mini-dose heparinization in the majority of cases. A dose is usually 5,000 units, twice a day or 2,500 units four times a day monitored with Partial Thomboplastin Generation Time.

The figures we present refer to definite symptomatic cases and, for that reason, I am sure, are low. Probably many existed as subclinical cases of deep vein thromboses and more aggressive searches through venography, scans and other techniques might diagnose this impending complication. Many investigators feel that without prophylactic anticoagulation, approximately 50% of total hip replacements develop deep vein thrombosis with 10% to 15% as clinical deep vein thrombosis with 10% pulmonary embolus and 1% to 2% of these dying of pulmonary embolization.[5, 6]

Various methods of protection include minidose heparin, warfarin, low molecular weight dextran and aspirin. These agents have reduced clinical deep vein thrombosis to an average of 5% and pulmonary embolus to 2% and fatal pulmonary embolus to nearly zero.

One must be cognizant of the inherent risks of each drug. Several large series of patients taking warfarin indicate 5% late major hematomas represented not only by clinical but, also, directly by a significant fall in hematocrit value, need for two or more transfusions, and/or the need for surgical evacuation of the hematoma.[6, 7] In the majority of our cases with the diagnosis of clinical deep vein thrombosis or pulmonary embolus, the patient is placed on a program of therapeutic heparinization followed by warfarin. No patient so treated has died. The most critical historical factor is a previous history of deep vein thrombosis, especially in the advanced age group and a rationale of low-dose heparin and warfarin seems reasonable here.

Deep infections have occurred in four cases. Our prophylactic measures to combat infection during the operative period are double gloves, prepping of the patient with betadine the night before surgery and again in the operating room, the use of a unidirectional laminar air flow system decreasing particulate matter in the air, meticulous attention to hemostasis, frequent irrigation of the wound with topical antibiotics, the use of suction drainage postoperatively and a minimum of talking with limited movement of personnel during the operating procedure.

In addition, the surgical team wears an exhaust system beneath their masks that filters exhaled air. Depending on the surgeon, some type of antibiotic plan is followed pre- and postoperatively. Two Charnley-Muller assemblies required removal for control of infection along with their cement. The patients were hospitalized for three to four weeks, receiving intravenous antibiotics that healed their wounds primarily. They then used crutches for a period of six months. At that time, their wounds were aspirated and found to be sterile. They then had reinsertion of a Muller prosthesis. Both of these patients received antibiotics for several months postoperatively and are presently functioning well two and three years after surgery.

TABLE 5
MAJOR COMPLICATIONS TYPE ANALYSIS

	(1971) Muller (231 Patients)	*(1978) Series II (123 Patients)*
Pulmonary Emboli	5 (2 fatal)	1
Deep Vein Thrombosis	3	2
Deep Infections	4	0
Dislocations	3	2
Loose Prosthesis (symptomatic)	20	0

Table 4 shows the number of revisions necessitated by loosening of the prosthesis.

Various series will indicate a radiographic loosening rate in the area of 20% with painful loosening in 10% to 15% of these after at least three years of follow-up.[3] The x-ray appearance of early loosening is a rarified line either at the prosthesis cement or a cement bone interface and later settling, medial displacement and tilting of the prosthesis with a scalloping effect in the bone.[3, 8, 9] The revision procedure is a much more tedious and technically difficult procedure than the original. This is made so by the necessity to remove all previous cement before inserting the new assembly and cement.

Originally, the Charnley-Muller prosthesis was used and was later changed to the Series II type. It seems that the varus position of the prosthesis, along with the diamond-shaped stem, is an adverse factor leading to an increased chance of insertion in the unfavorable varus position.[3]

The diamond shape of the stem also enhances the possibility for fracturing of the cement.

Since the switch to the Series II prosthesis in February, 1978, there is no instance of symptomatic loosening requiring a revision. The design of the Series II prosthesis allows for positioning in a more valgus attitude and also the various thicknesses of the stem minimize the amount of cement required to stabilize the prosthesis. Also, the stem itself is oval and offers no sharp edges for cement fracturing. In defense of the Charnley-Muller prosthesis, I think it should be indicated that it was not originally appreciated that the position of the prosthesis or cement techniques would be significant in the long term. Therefore, with appreciation of these facts and possibly utilizing the same techniques that are being performed with the Series II, improved results could have been obtained with the Charnley-Muller prosthesis.

From the statistics presented here, there appears to be some evidence that the Series II system is functioning better than the Charnley-Muller (Table 5). For the reasons that I have described, however, this might be entirely on the basis of the technique rather than the implant. Because of many excellent results with both of these systems, no patient seems to come to grief sooner than the other if the device is inserted properly according to the method of the inventor. The more active patients are advised that, possibly under the best circumstances, they might expect at the end of 10 years to experience a failure from the prosthesis or from prosthesis cement disruption requiring a revision. In 1974, Muller predicted that after ten years, one third of the patients will have had a reoperation for infection or loosening problems, should have had the operation or will have died.[1]

We have learned to respect the properties of the cement which is more of an epoxy bonding agent than an actual glue. We respect the effect of the monomer on the vascular system and realize that when the powdered polymer and liquid monomer are mixed, a curing process is initiated and lasts approximately 12 to 14 minutes. The monomer has present effects causing vasodilation and is a direct myocardial toxin.[5]

Because of the blood pressure drop of anywhere from 15 mm to 30 mm Hg, hypovolemia is to be avoided by maintaining proper volume to the point of cement insertion. During the 12- to 14-minute curing stage, heat is produced at the later part of this period, producing thermal necrosis, and a necrotic layer of fat does appear microscopically adjacent to the acrylic.[8, 10]

A very thin pseudocapsule has been shown to exist in most cases between the cement and bone interface that can lead to loosening in some cases. More often, the loosening that we have seen is at the metal cement interface and is most likely on the basis of poor cement technique, improper positioning of the prosthesis and inadequate removal of cancellous bone or infection.[3, 11]

Five dislocations have occurred in our series. This number has been diminished recently by attention to three precepts — correct orientation, correct tension and the elimination of leverage fulkra.[5] Two instances of deep hematoma have been noted, one in the liver requiring an exploratory laparotomy and the other in the abdominal wall. Both of these patients were prophylatically anticoagulated with warfarin (Coumadin) at the time of the occurrences.

Summary

A great deal has been learned in the past ten years in several areas, especially in respect to deep vein thrombosis. Of the various predisposing factors, it appears that the history of the previous venous thrombosis, especially in the pateint with advancing age, greatly increases the postoperative likelihood of deep vein thrombosis and pulmonary embolization.[10, 12] Also in these cases, the added risk of utilizing warfarin along with mini-dose heparinization seems warranted. Evaluating the chronically ill or bedridden patients prior to surgery to interpret whether or not they have been disbursing emboli prior to surgery also would be useful. There certainly is not just one operation of the arthritic hip with which we have been quite satisfied in our results. We recognize that in young age groups, more conservative operative procedures may be considered before a total hip replacement.

TABLE 6
200 PATIENTS OBSERVED FOR FIVE YEARS

		Unilateral	*Bilateral*
Excellent	**No pain: No cane: Full motion**	**90**	**8**
Good	**No pain: Occasional use of a cane. Up to 75% normal movement**	**80**	**8**
Fair	**Less, but some pain. Ambulating with two canes. 50% normal motion.**	**12**	**2**
Poor	**Moderate to severe pain. Marked limitation of motion.**	**0**	**0**
	Total	**182**	**18**

Finally, a study of 324 cases in a nine-year period is not a large series or a long follow-up. For this reason, except in special circumstances, careful consideration should be undertaken before recommending the procedure for patients under the age of 60. Two hundred of my patients have been observed for five years and approximately 85% to 90% are in the good to excellent range at this time (Table 6). No assemblies have been totally extirpated with their cement and the two assemblies which were removed for periods of six months have been replaced.

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(Continued on page 750)

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Clemastine Fumarate for Symptomatic Relief of Allergic Rhinitis

ANTIHISTAMINES are potent compounds that block the action of histamine on H_1-receptor-containing tissues. Virtually all of the antihistamines and antihistamine/decongestant combinations currently available are H_1-receptor blockers, except cimetidine. Their action inhibits the binding between endogenous histamine and H_1-receptors located primarily in smooth muscle and epidermal tissue, which is responsible for the characteristic symptomatology of atopic disease.

One of the main side effects associated with antihistamine use is drowsiness, which may be of a disabling nature in some patients. In addition, tolerance to specific antihistaminic agents often develops within one or two weeks of beginning treatment. Obviously, a compound with a low potential for inducing both drowsiness and tolerance would be beneficial to patients suffering from allergic conditions.

Clemastine fumarate, an antihistamine previously available in Europe and Australia, was approved for use in the United States in the late 1970s. Classified as a benzhydryl ether, it is structurally different from the other main classes of antihistamines: ethylenediamines, ethanolamines, alkylamines, piperazines and phenothiazines. In various studies, clemastine fumarate has been shown to be an effective agent for the symptomatic relief of seasonal and perennial allergic rhinitis, urticaria and other allergic dermatoses. For example, Pan[1] found that clemastine fumarate, in a dosage of 1 mg to 3 mg daily, produced good-to-excellent results in 45 of 50 patients suffering from seasonal and perennial allergic rhinitis. Using whole body plethysmography and intranasal color photography, Thomas *et al*[2] found that at two hours after drug administration, clemastine fumarate was more effective than chlorpheniramine maleate in decreasing nasal resistance and congestion. Other investigators have reported similar results.[3-6]

In this study, we sought to determine both the efficacy and drowsiness-inducing potential of clemastine fumarate when administered to patients suffering from seasonal and perennial allergic rhinitis.

Clemastine fumarate, an antihistamine belonging to the benzhydryl ether group, produced marked symptomatic relief in 11 of 16 patients (69%) suffering from allergic rhinitis. Side effects were limited to mild drowsiness in one patient, nausea in one patient and gastrointestinal intolerance in one patient.

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MATERIALS AND METHODS

A total of 16 patients (12 male and four female), ranging in age from seven to 38 years, were treated with clemastine fumarate. All patients were suffering from allergic rhinitis that was complicated by asthma in four patients and bronchospasm in one patient. Several patients had received previous antihistamine therapy for their allergic rhinitis but had experienced either unsatisfactory results or unwanted side effects. Patients were asked to assess the effectiveness of clemastine fumarate in relieving their symptoms and to report any side effects while receiving the drug. The drug was prescribed in the 1.34 mg dosage for 15 patients, and one received the 2.68 mg dosage.

RESULTS

Eleven of 16 patients (69%) experienced some relief from symptoms associated with allergic rhinitis (Table 1). Of the eight patients who received previous treatment with other antihistamines or antihistamine/decongestant combinations, five rated clemastine fumarate equally effective or

TABLE 1
PATIENT RESPONSE TO CLEMASTINE FUMARATE

Patient	*Diagnosis*	*Response*
JD	Allergic Rhinitis (AR)	Good improvement in nasal symptoms
CB	AR	Excellent clearing of nasal congestion
JB	AR	Good improvement in nasal congestion
GW	AR	No improvement
LM	AR	No improvement
NS	AR	No improvement; drug stopped on second day due to GI intolerance
JW	AR	Excellent clearing of symptoms
GB	AR	Good relief of nasal symptoms
ST	AR	No improvement
TF	AR/asthma	Fair clearing of nasal congestion
JH	AR/asthma	No improvement
MF	AR/asthma	Good improvement
JK	AR/asthma	Excellent relief of nasal symptoms
KM	AR/broncho-spasm	Fair clearing of wheezing and congestion
JS	AR/conjunctivitis	Good relief of nasal symptoms and clearing of conjunctivitis
TT	AR/sinusitis	Excellent improvement of nasal symptoms and hoarseness

more effective than the other agents (Table 2). In several patients, the allergic rhinitis was complicated by other allergic conditions (asthma — four patients, bronchitis — one patient, sinusitis — one patient). Side effects were virtually nonexistent, with the most serious being severe gastrointestinal (GI) intolerance in a 13-year-old boy.

Following is a discussion of three patients who reported side effects while taking clemastine fumarate:

A 13-year-old boy with allergic rhinitis was started on a trial of 1.34 mg clemastine fumarate twice a day. After two days of treatment, his mother called to complain that the drug was causing severe GI distress in the patient. The drug was immediately discontinued. This patient had reported GI intolerance while taking other antihistamines.

A 15-year-old boy suffering from allergic rhinitis was given clemastine fumarate 1.34 mg twice a day for one week. The patient complained of nausea and expressed a desire to return to chlorpheniramine maleate/d-pseudo-ephedrine combination, which apparently did not produce this side effect.

A 14-year-old boy suffering from allergic rhinitis and bronchitis complicated by asthma was started on a regimen of clemastine fumarate 1.34 mg twice a day. The patient reported initial drowsiness, which spontaneously abated. He currently is experiencing excellent relief of symptoms and is taking the drug as needed.

Discussion

According to the classification scheme proposed by Coombs and Gell,[7] Type I hypersensitivity reactions result from the release of pharmacologically active substances as histamine or slow-reacting substances of anaphylaxis from IgE-sensitized basophils and mast cells after contact with exogenous or endogenous antigen. The resultant binding of these substances to tissue receptors produces vasodilation, increased capillary permeability, smooth muscle contraction and eosinophilia. The latter is associated with asthma or eczematous eruptions. Clinical manifestations include hypotension; urticaria; angioedema; and spasm of bronchial, gastrointestinal or uterine musculature. Type I reactions play a role in the development of seasonal and perennial allergic rhinitis; allergic asthma; systemic anaphylaxis; reactions to insect stings, foods and drugs; and some cases of urticaria. Although the terms "hypersensitivity and allergy" often are used synonymously to indicate an exaggerated response to an antigen, the term allergy implies an IgE-mediated event.

Hay fever, asthma and some cases of urticaria are examples of atopic disease. Patients with atopic disease have an inherited predisposition to develop hypersensitivity to allergens in the environment that are harmless to 80% of the general population. Both seasonal and perennial allergic

TABLE 2
EFFECTIVENESS OF CLEMASTINE FUMARATE COMPARED WITH OTHER ANTIHISTAMINES

Patient	*Clemastine Fumarate Effectiveness*	*Other Antihistamines*
JD	More effective	Chlorpheniramine maleate; Dimetapp®*
JB	More effective, less drowsiness	Dimetapp*
ST	Less effective	Dimetapp*
GB	More effective, less drowsiness	Chlorpheniramine maleate; Dimetapp*
GW	Less effective	Deconamine®*
TF	Less effective but less drowsiness	Isoclor®*
KM	Equally effective, less drowsiness	Rondec™*
TT	More effective	Comhist®*

* Also contains decongestants.

rhinitis are mediated by histamine release and subsequent binding to H_1-receptors located in the cardiovascular system, extravascular smooth muscle and exocrine glands.

Hay fever, the acute seasonal form of allergic rhinitis, generally is induced by either windborne pollens or airborne fungus spores. In this condition, the nose, palate and eyes begin to itch after onset of the pollen season. Sneezing, lacrimation and rhinorrhea soon follow the pruritus. Frontal headaches, irritability, anorexia and insomnia may be superimposed upon the acute episodes. Coughing and asthmatic wheezing may develop as pollen counts rise. Eosinophils are present in the nasal mucus and give rise to the characteristic bluish-red color of the mucosa.

In contrast to hay fever, symptoms of perennial rhinitis vary in severity throughout the year. Extranasal symptoms such as conjunctivitis are uncommon, but some patients have concurrent sinusitis or nasal polyps or both. The diagnosis of seasonal or perennial allergic rhinitis is supported by a positive history of atopic disease, numerous eosinophils in the nasal secretions, the characteristic bluish-red mucosa, and positive skin tests. Sometimes the physician may encounter patients who suffer from chronic rhinitis, sinusitis, and polyps but have negative skin tests; these patients are not allergic to environmental antigens but often are sensitive to aspirin or indomethacin. Such patients also should be evaluated for sensitivity to sodium benzoate, a common food preservative, and tartrazine yellow, an artificial food coloring, by a trial elimination of these additives from the diet. A trial with clemastine fumarate also may be appropriate for these patients. Szczeklik and Serwonska[8] have shown that clemastine can inhibit idiosyncratic reactions to aspirin, such as flushing, rhinorrhea and headache, in some asthmatic patients.

CONCLUSION

Results of this small patient study corroborate those of earlier studies, which suggested that clemastine fumarate offers significant advantages over some of the older antihistamines. Most of our patients experienced marked relief of the symptoms associated with allergic rhinitis, with mild drowsiness, which resolved spontaneously, noted by only one patient. Clemastine fumarate is somewhat unique since, as a group, antihistamines are potent drowsiness-inducing compounds. A trial with clemastine fumarate would seem to be indicated for patients who require an antihistamine and for those who have developed tolerance to other antihistaminic agents.

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Total Hip Replacement

(Continued from page 747)

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Isoflurane: Clinical Experiences

Case Reports

The authors cite seven case reports to illustrate the versatility of isoflurane as observed in a recent study of 100 patients. They conclude that this new drug is a safe and versatile anesthetic agent and believe its advantages far outweigh its disadvantages. Comparisons are included in their discussion.

Dr. Krechel is Assistant Professor, Dr. Cobb is Associate Professor and Dr. Fabian is Professor, Department of Anesthesiology, Washington University School of Medicine.

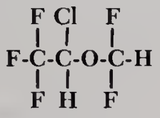
RECENTLY, a new drug, isoflurane (Forane®) has been released by the Food and Drug Administration. The physical and chemical properties (Table 1)[1-4] as well as the pharmacological properties of this drug are described in the literature.[5-9]

The purpose of this report is to illustrate, by way of several case reports, the great versatility of this agent observed in a recent series of 100 patients.

CASE REPORTS

Case #1. An 82-year-old white man weighing 162 lbs and 6 ft tall was admitted to the hospital for elective resection of an abdominal aortic aneurysm that had been discovered on routine examination some six years previously. At that time, it measured 6 cm in diameter by ultrasound. One week prior to admission, he had fallen and sustained abdominal trauma that caused pain in the right upper quadrant. Results of an examination at another hospital were negative except for the abdominal aortic aneurysm that measured 8 cm in diameter. His past history was negative except for hypertension of 15-years' duration, well controlled with chlorthalidone. In addition, he had a history of frequent ventricular premature contractions. He had no known allergies and his medications included only chlorthiadone and nicotinic acid. He had received no prior anesthetics.

TABLE 1
ISOFLURANE: PHYSICAL AND CHEMICAL PROPERTIES

Formula	 $F\text{-}\overset{F}{\underset{F}{C}}\text{-}\overset{Cl}{\underset{H}{C}}\text{-}O\text{-}\overset{F}{\underset{F}{C}}\text{-}H$
Vapor Pressure	
20°C.	**239.5**
22°C.	**261.8**
Odor	**Ethereal, mildly pungent**
Preservative	**None**
Stability in:	
Soda lime	**Stable**
UV light	**Stable**
Minimum Flammable Concentration (70% N_2O:30% O_2)	**7.0%**
Partition Coefficients:	
Blood/gas 37°	**1.4**
Oil/gas 37°	**91**
MAC:	
In O_2 (31-55 yrs)	**1.15**
In 70% N_2O (31-55 yrs)	**0.5**
Degree of Metabolism	**0.17%**

Sources: Eger (1974),[1] Vitcha (1971),[2] Leonard (1975),[3] Holaday (1975).[13]

Results of his physical examination were normal except for a pulsatile mass in the right upper quadrant of the abdomen measuring 14 cm x 10 cm. The right femoral pulse was noted to be reduced as compared to the left. An irregular heart rhythm was noted but no murmurs or extra sounds were heard. His vital signs on admission included a pulse rate of 80 beats per minute; respirations, 18 per minute; temperature, 36C, and blood pressure, 110/80 mm Hg. Laboratory values were normal except for a serum potassium value of 3.1 mmol/liter. His chest x-ray was normal. His electrocardiogram showed a normal sinus rhythm with left ventricular hypertrophy. Results of pulmonary function tests and arterial blood gases were also normal. A Swan-Ganz catheter was placed preoperatively. Pulmonary artery pressures were 19/9 mmHg with a wedge of 4 mm Hg with a cardiac output of 6.63 liters/minute. The patient was brought to the operating room where he underwent an uneventful aortic aneurysm repair employing isoflurane anesthesia (Fig. 1).

Of note are the cardiac output of 9 L/minute after induction of anesthesia and the stable intraoperative course. Postoperatively, the patient continued to do well and was discharged from the hospital two weeks after the operation.

EDITOR'S NOTE
Because of space requirements, Figs. 1-7 appear on pages 754-757. The discussion is continued on page 757.

Case #2. A 60-year-old white woman was 5 ft 8 in tall and weighed 200 lb. She had insulin-dependent diabetes mellitus and was admitted to the hospital complaining of a draining left foot ulcer, fever, chills and chest pains of 24 hours duration. Her past history included adult onset diabetes mellitus of 27-years duration complicated by recurrent foot ulcers and retinopathy. She had a positive history of crescendo angina relieved by nitroglycerin and a silent myocardial infarction occurring more than two years prior to admission.

The patient had undergone 17 surgical procedures of varying kinds during the three years prior to admission. All were without complications. Her medications included hydrochlorothiazide; amitriptyline; thyroid (2.5 gr); pork insulin NPH (50 units) administered subcutaneously every morning and 20 units every afternoon; and nitroglycerin as needed. She was allergic to penicillin and keflin.

Physical examination revealed a grade III/VI systolic ejection murmur at the left sternal border. There was a 2 cm x 3 cm ulcer on her left heel with heat, erythma, swelling and tenderness to the knee. Vital signs were noted as a pulse rate of 100 per minute, blood pressure of 140/60, respiratory rate of 30 per minute, and a temperature of 39.2C taken orally. Laboratory values included the following: serum sodium, 125 mmol/L; potassium, 2.9 mm/L; chloride, 89 mmol/L; total CO_2, 25.7 mmol/L; a creatinine, 1.2 mg/dl; and blood glucose, 347 mg%. Arterial blood gases on room air revealed pH 7.55, $PaCO_2$ 30 mm Hg PaO_2 62 mm Hg. Her hemoglobin value was 14.8 g/dl; hematocrit, 41.4%; and white blood cell count, 20.6 K/cubic mm. A chest x-ray showed no infiltrates and heart size at upper limits of normal. An electrocardiogram showed occasional atrial premature contractions and Q waves in leads II, III, AVF and V_1-V_4.

Her hospital course was complicated by several episodes of ventricular tachycardia treated with lidocaine initially and then by quinidine gluconate. In addition, there was an episode of congestive heart failure. Following stabilization of these problems, the patient was brought to the operating room for amputation below her left knee for which she was anesthetized uneventfully with isoflurane (Fig. 2). No problems occurred postoperatively and the patient was discharged 16 days after surgery.

Case #3. The patient was a 21-year-old white man who was 5 ft 6 in tall and weighed 145 lb. He was admitted for a living, related donor kidney transplant. He had been in his usual state of good health until eight months prior to this admission when he developed nausea, vomiting, weight loss and hypertension. The diagnosis of chronic renal failure was made after an extensive work-up.

He was found to have bilateral, hypoplastic kidneys thought to be congenitally hypoplastic and to be the cause of his renal failure. He was being dialysed three times per week. There were no known allergies.

His medications included hydralazine, basic aluminum carbonate and indomethacin. He had been given general anesthesia for an appendectomy and for knee surgery several years before without problems. On physical examination, his blood pressure was 160/70; pulse rate 90; and regular, temperature 37.2C. He had a grade II/VI systolic ejection murmur at the lower left sternal border. There were no other unusual findings.

Chest x-ray and electrocardiogram were normal. The hemoglobin value was 9.5 g/dl with a hematocrit value of 26.8%. Laboratory studies disclosed the following values: serum sodium, 130 mmol/L; potassium, 3.9 mmol/L; chloride, 86 mmol/L; creatinine, 11.7 mg/dl%; total CO_2, 20.8 mmol/L; and glucose, 130 mg/dl%. Blood urea nitrogen level was 105 mg/dl% and serum phosphate was 12.5 mg/dl%. Alkaline phosphatase was elevated at 109 international units (IU) and creatine kinase was elevated at 254 IU. Additional laboratory values were within normal limits.

The patient was brought to the operating room where he received an uneventful isoflurane anesthetic for his kidney transplant (Fig. 3). There were no postoperative complications and he was discharged 17 days postoperatively at which time his creatinine level was 1.4 mg/dl.

Case #4. A 3-year-old boy weighing 32 lb was admitted to the hospital outpatient facility for elective repair of an asymptomatic right inguinal hernia first noted as a bulge in the groin by the mother three weeks prior to admission. The child was otherwise healthy, taking no medications and without any known allergies or prior surgical procedures. Physical examination revealed only the right inguinal hernia.

Preoperatively, the hemoglobin value was 11 g/dl and the hematocrit value was 35%. The child was anesthetized uneventfully by using isoflurane (Fig. 4). There were no problems following the operation and he was discharged five hours postoperatively.

Case # 5. A 47-year-old white woman was 5 ft 8 in tall and weighed 129 lb. She was admitted to the hospital with the chief complaint of a lump in the right breast. The mass had first been noticed two months prior to her admission on self examination. It was not painful and no nipple discharge had been noted. Otherwise, the patient was in good health, taking no medications and had no known allergies. She had undergone a vaginal hysterectomy three years previously and had suffered no complications.

Physical examination revealed only a 2 cm x 2 cm mass in the inner upper quadrant of the right breast. It was not tender and there were no discharges or retractions noted. Vital signs revealed a pulse rate of 90 per minute; respirations, 18 per minute; blood pressure, 130/80; and oral temperature, 37.3C. Laboratory values, chest x-ray, and electrocardiogram were all within normal limits.

The patient was brought to the operating room where she was anesthetized with isoflurane (Fig. 5) for a right breast specimen biopsy. There were no intraoperative or postoperative problems. Because the pathology examination showed invasive carcinoma, the patient underwent a modified radical mastectomy with prosthetic implant five days later with a narcotic relaxant anesthetic technique. Again, there were no problems intraoperatively or postoperatively and the patient was discharged eight days after surgery.

Case #6. A 55-year old black woman was 5 ft 5 in tall and weighed 147 lb. She was admitted to the hospital because of hypertension. She had known hypertension of 18 mos. duration and had been treated with alpha methyl-dopa plus hydrochlorothiazide for that period without benefit. Her blood pressure fluctuated between 130/70-200/110. Antihypertensive therapy was changed to prazosin with initial good results. A spot urine for vanillylmandelic acid (VMA) done five months prior to admission was approximately twice normal.

The past medical history was significant because of a one-year history of severe, deforming rheumatoid arthritis involving fingers, wrists and knees. This improved with gold therapy. There was also a history of diet controlled adult onset diabetes mellitus and an enlarged pulmonary artery on chest x-ray and CAT scan. Medications included hydrochlorothiazide, prazosin, tolmetin, potassium supplements, propoxyphene and gold injections. There were no known allergies. Prior operations had been uneventful, the last having been five months prior to admission.

Physical examination results were remarkable for an increased pulmonic second sound and a harsh III/VI systolic descrescendo murmur at the pulmonic area radiating to the back, apex and quietly to the axilla, varying with respirations. The extremities revealed changes consistent with rheumatoid arthritis. Vital signs were remarkable for a blood pressure of 210/100; pulse rate, 75 per minute; respirations, 16 per minute; and oral temperature, 36.5C. Urinary catechols, metanephrines and VMAs were all markedly elevated as were plasma norepinephrine levels (7,030 mg; normal 200-400 mg). Plasma epinephrine levels were minimally increased 53 mg (normals 20-50 mg). A body CAT scan indicated masses in both adrenals consistent with pheochromocytoma. The hemoglobin value was 11.4 g/dl; the hematocrit value was 33.5%. Arterial blood gases on room air were pH 7.39, $PaCO_2$ 34, PaO_2 82. The chest x-ray showed only the dilated pulmonary artery and the electrocardiogram showed only poor R wave progression across the precordium.

The patient was prepared for an operation with 30 mg of phenoxybenzamine twice a day for three days. She was transferred to the intensive care unit on the evening prior to the operation for placement of a Swan-Ganz catheter and an arterial line. Pulmonary artery pressures were 48/20 mm Hg, wedge 13 mmHg with a cardiac output of 7L/min. Episodes of labile hypertension continued, however these responded well to a phentolamine drip. B-blockade was accomplished with 5 mg of propranolol administered intravenously. The patient was taken to the operating room where she was anesthetized with isoflurane (Fig. 6) for her bilateral adrenalectomy.

Of note is the smooth intraoperative course and the preservation of cardiac output. The postoperative period was marked by continued hypertension in the range of 220/100. Initially, this was treated with sodium nitroprusside. Urinary catechols, metanephrines and VMAs were normal, suggesting a history of essential hypertension. She was eventually controlled on hydralazine and propranolol. The patient was discharged three weeks postoperatively.

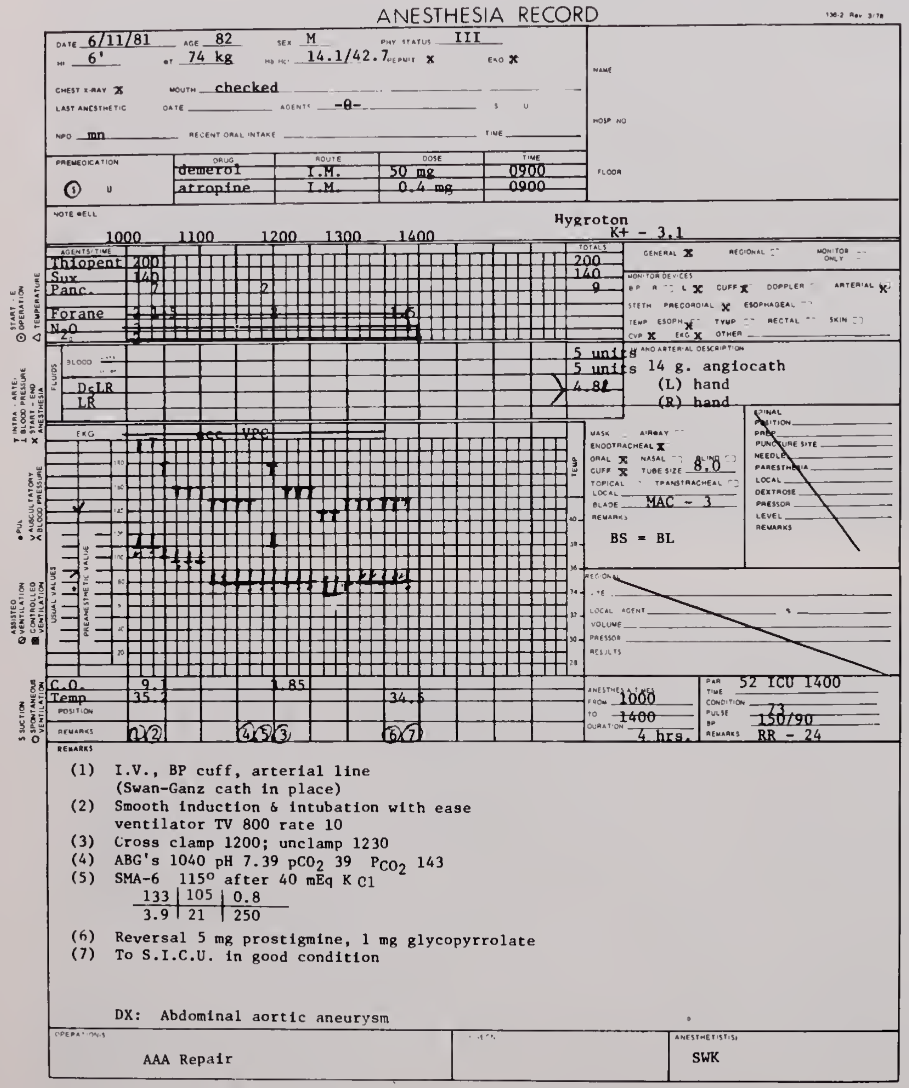
Case #7. The patient was a one-month-old white male infant admitted with a ten-day history of projectile vomiting. He was a 4.28 kg full-term product of 28 y/o gravida 4, para 3, mother with no complications of pregnancy or delivery. The baby was described as a slow feeder from birth but, otherwise, was a healthy infant. Results of his physical examination upon admission were essentially normal. His weight was 8½ lb. A barium swallow confirmed the presumptive diagnosis of pyloric stenosis. Serum electrolytes revealed the following: sodium, 143 mmol/L; potassium, 6.2 mmol/L; (hemolyzed) Cl 110 mmol/L; CO_2, 18 mmol/L; and arterial pH 7.27. Hemoglobin value was 15.0 g/dl and the hematocrit value was 43.8%. The child received an uneventful anesthetic with isoflurane for his pyloromyotomy (Fig. 7). There were no problems postoperatively and he was discharged two days after the procedure.

Discussion

Isoflurane shares a number of properties with previously available potent inhalation anesthetics such as halothane and enflurane. Like those agents, it is nonflammable.[3] It is stable in the presence of strong sunlight or alkali.[2] Like enflurane, it requires no preservatives.[2] Its vapor pressure is virtually identical to that of halothane.[2] Like enflurane, it has a very pungent odor. Each of these agents is a general metabolic depressant,[5, 10, 11] thus reducing total body oxygen demand during anesthesia. Isoflurane, too, is a respiratory depressant. However, at low concentration (1 MAC) with surgical stimulation, $PaCO_2$ will remain essentially normal in the spontaneously breathing patient. In the absence of surgical stimulation or at higher than 1 MAC concentrations, $PaCO_2$ does tend to rise.[6]

Isoflurane, like enflurane, is an excellent muscle relaxant and in many types of surgical procedures can be utilized without the aid of adjuvant muscle relaxants.[7] Cerebral blood flow and, hence, intracranial pressure may be increased by each of these agents, so appropriate precautions must be exercised when they are used in the presence of intracranial space-occupying lesions.[8]

As in the case of halothane and enflurane, uterine musculature is relaxed, especially at more than 1 MAC concentration.[9] Excessive bleeding



ANESTHESIA RECORD

DATE 6/11/81 AGE 82 SEX M PHY STATUS III
HT 6' WT 74 kg Hb Hct 14.1/42.7 PERMIT X EKG X
CHEST X-RAY X MOUTH checked
LAST ANESTHETIC DATE AGENTS -0-
NPO mn RECENT ORAL INTAKE TIME

PREMEDICATION	DRUG	ROUTE	DOSE	TIME
Ⓢ U	demerol	I.M.	50 mg	0900
	atropine	I.M.	0.4 mg	0900

NOTE WELL Hygroton K+ - 3.1

AGENTS/TIME	1000	1100	1200	1300	1400	TOTALS
Thiopent	200					200
Sux	140					140
Panc.	7		2			9
Forane	2 1.5		1		1.6	
N_2O / O_2	3 / 3					

FLUIDS: BLOOD 5 units, 5 units; D_5LR, LR 4.8 l

GENERAL X
MONITOR DEVICES: BP L X CUFF X ARTERIAL X; STETH PRECORDIAL X; TEMP ESOPH X; CVP X EKG X
IV AND ARTERIAL DESCRIPTION: 14 g. angiocath (L) hand (R) hand

EKG: VPC

ENDOTRACHEAL X ORAL X CUFF X TUBE SIZE 8.0 BLADE MAC - 3
BS = BL

C.O. 9.1 1.85
Temp 35.2 34.5
REMARKS ①② ④⑤③ ⑥⑦

ANESTHESIA TIMES FROM 1000 TO 1400 DURATION 4 hrs.
PAR 52 ICU 1400 PULSE 73 BP 150/90 REMARKS RR - 24

REMARKS
(1) I.V., BP cuff, arterial line (Swan-Ganz cath in place)
(2) Smooth induction & intubation with ease ventilator TV 800 rate 10
(3) Cross clamp 1200; unclamp 1230
(4) ABG's 1040 pH 7.39 pCO_2 39 P_{CO_2} 143
(5) SMA-6 115° after 40 mEq K Cl

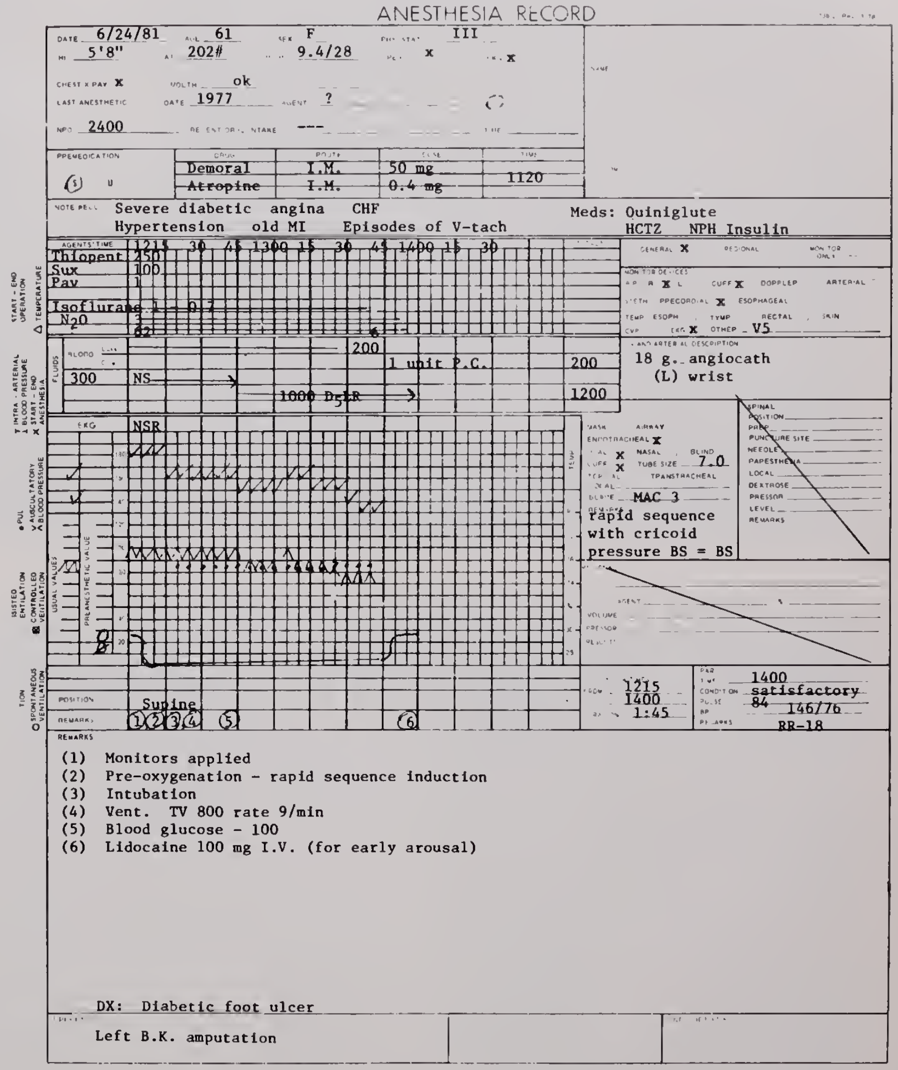
133	105	0.8
3.9	21	250

(6) Reversal 5 mg prostigmine, 1 mg glycopyrrolate
(7) To S.I.C.U. in good condition

DX: Abdominal aortic aneurysm

OPERATION(S) AAA Repair ANESTHETIST(S) SWK

Fig. 1



ANESTHESIA RECORD

DATE 6/24/81 AGE 61 SEX F PHY STAT III
HT 5'8" WT 202# Hb Hct 9.4/28 PERMIT X EKG X
CHEST X-RAY X MOUTH ok
LAST ANESTHETIC DATE 1977 AGENT ?
NPO 2400 RECENT ORAL INTAKE ---

PREMEDICATION	DRUG	ROUTE	DOSE	TIME
Ⓢ U	Demoral	I.M.	50 mg	1120
	Atropine	I.M.	0.4 mg	

NOTE WELL Severe diabetic angina CHF Hypertension old MI Episodes of V-tach
Meds: Quiniglute HCTZ NPH Insulin

AGENTS/TIME	1215	30	45	1300	15	30	45	1400	15	30
Thiopent	250									
Sux	100									
Pav	1									
Isoflurane	1 - 0.7									
N_2O / O_2	3 / 62									

FLUIDS: BLOOD 200, 1 unit P.C. 200; 300 NS; 1000 D_5LR 1200

GENERAL X
MONITOR DEVICES: BP R X CUFF X; STETH PRECORDIAL X; EKG X OTHER V5
IV AND ARTERIAL DESCRIPTION: 18 g. angiocath (L) wrist

EKG NSR

ENDOTRACHEAL X ORAL X CUFF X TUBE SIZE 7.0 BLADE MAC 3
REMARKS rapid sequence with cricoid pressure BS = BS

POSITION Supine
REMARKS ①②③④ ⑤ ⑥

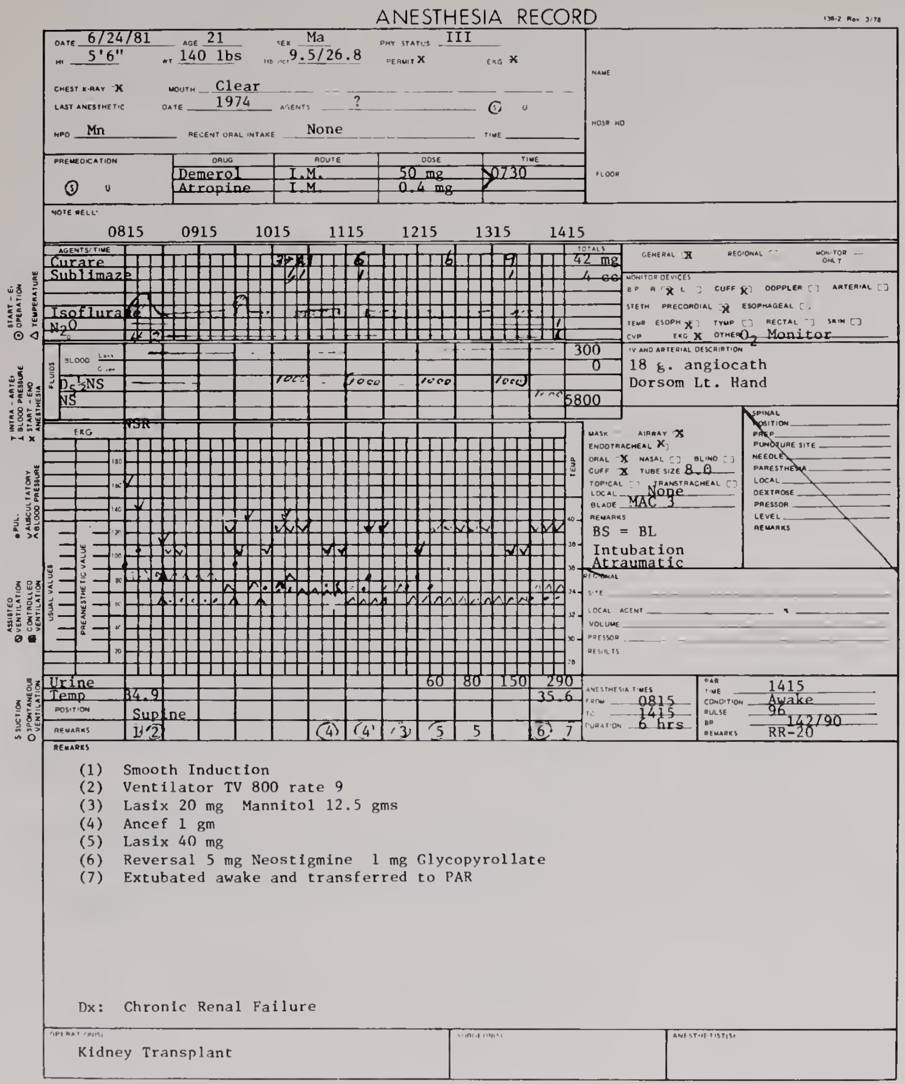
FROM 1215 TO 1400 DURATION 1:45
PAR TIME 1400 CONDITION satisfactory PULSE 84 BP 146/76 REMARKS RR-18

REMARKS
(1) Monitors applied
(2) Pre-oxygenation - rapid sequence induction
(3) Intubation
(4) Vent. TV 800 rate 9/min
(5) Blood glucose - 100
(6) Lidocaine 100 mg I.V. (for early arousal)

DX: Diabetic foot ulcer

Left B.K. amputation

Fig. 2



ANESTHESIA RECORD

DATE 6/24/81 AGE 21 SEX Ma PHY STATUS III
HT 5'6" WT 140 lbs HB/HCT 9.5/26.8 PERMIT X EKG X
CHEST X-RAY X MOUTH Clear
LAST ANESTHETIC DATE 1974 AGENTS ?
NPO Mn RECENT ORAL INTAKE None

PREMEDICATION	DRUG	ROUTE	DOSE	TIME
	Demerol	I.M.	50 mg	0730
	Atropine	I.M.	0.4 mg	

0815 0915 1015 1115 1215 1315 1415

AGENTS/TIME: Curare, Sublimaze, Isoflurane, N_2O — TOTALS 42 mg, 4 cc
GENERAL X
MONITOR DEVICES: CUFF X; STETH PRECORDIAL X; TEMP ESOPH X; EKG X; OTHER O_2 Monitor
IV AND ARTERIAL DESCRIPTION: 18 g. angiocath Dorsom Lt. Hand
FLUIDS: $D_5\frac{1}{3}$NS, NS — 300, 0, 5800
MASK AIRWAY X; ENDOTRACHEAL X; ORAL X; CUFF X; TUBE SIZE 8.0; LOCAL None; BLADE MAC 3
REMARKS: BS = BL Intubation Atraumatic

Urine 60 80 150 290
Temp 34.9 35.6
POSITION Supine
REMARKS 1 2 (4) (4) 3 5 5 6 7

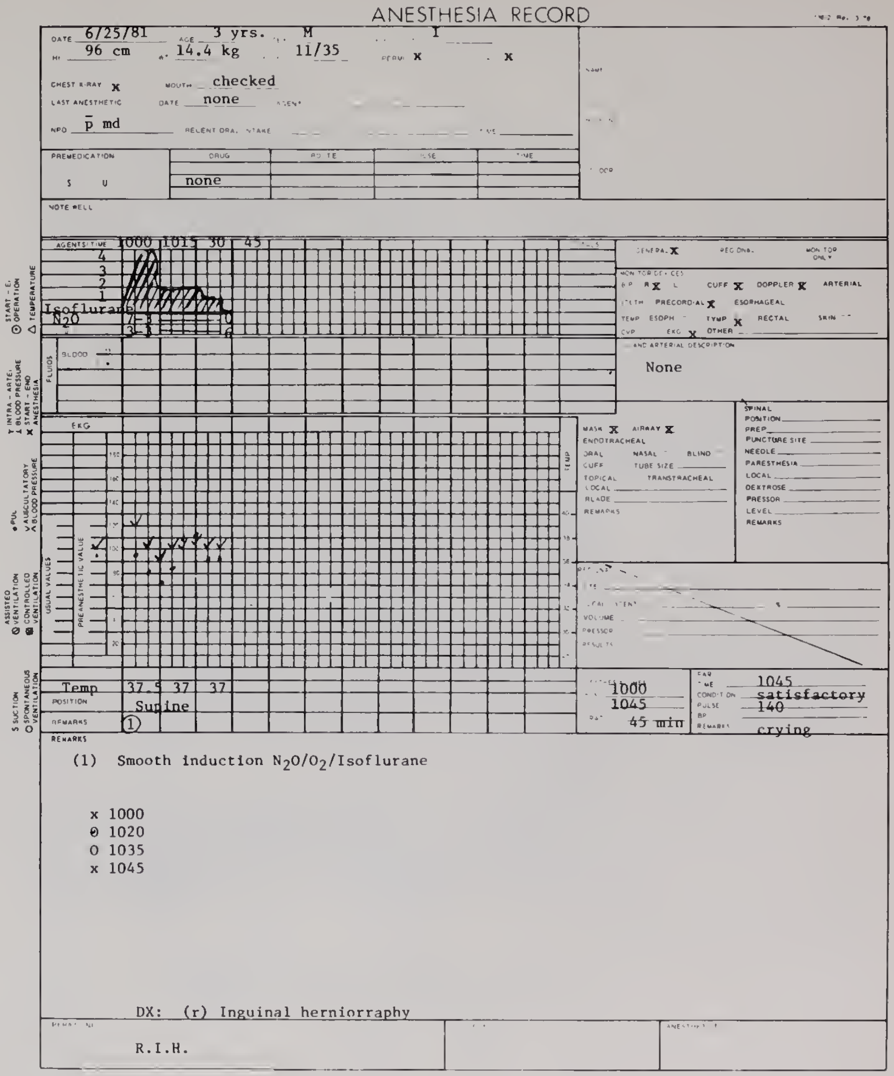
ANESTHESIA TIMES FROM 0815 TO 1415 DURATION 6 hrs
PAR TIME 1415 CONDITION Awake PULSE 96 BP 142/90 REMARKS RR-20

REMARKS
(1) Smooth Induction
(2) Ventilator TV 800 rate 9
(3) Lasix 20 mg Mannitol 12.5 gms
(4) Ancef 1 gm
(5) Lasix 40 mg
(6) Reversal 5 mg Neostigmine 1 mg Glycopyrollate
(7) Extubated awake and transferred to PAR

Dx: Chronic Renal Failure

OPERATION(S) Kidney Transplant

Fig. 3



ANESTHESIA RECORD

DATE 6/25/81 AGE 3 yrs. SEX M I
HT 96 cm WT 14.4 kg 11/35 PERMIT X X
CHEST X-RAY X MOUTH checked
LAST ANESTHETIC DATE none
NPO p̄ md

PREMEDICATION: none

AGENTS/TIME 1000 1015 30 45
Isoflurane, N_2O
GENERAL X
MONITOR DEVICES: BP R X; CUFF X; DOPPLER X; STETH PRECORDIAL X; TEMP TYMP X; EKG X
IV AND ARTERIAL DESCRIPTION: None
MASK X AIRWAY X

Temp 37.5 37 37
POSITION Supine
REMARKS ①

ANESTHESIA TIMES 1000 1045 45 min
PAR TIME 1045 CONDITION satisfactory PULSE 140 REMARKS crying

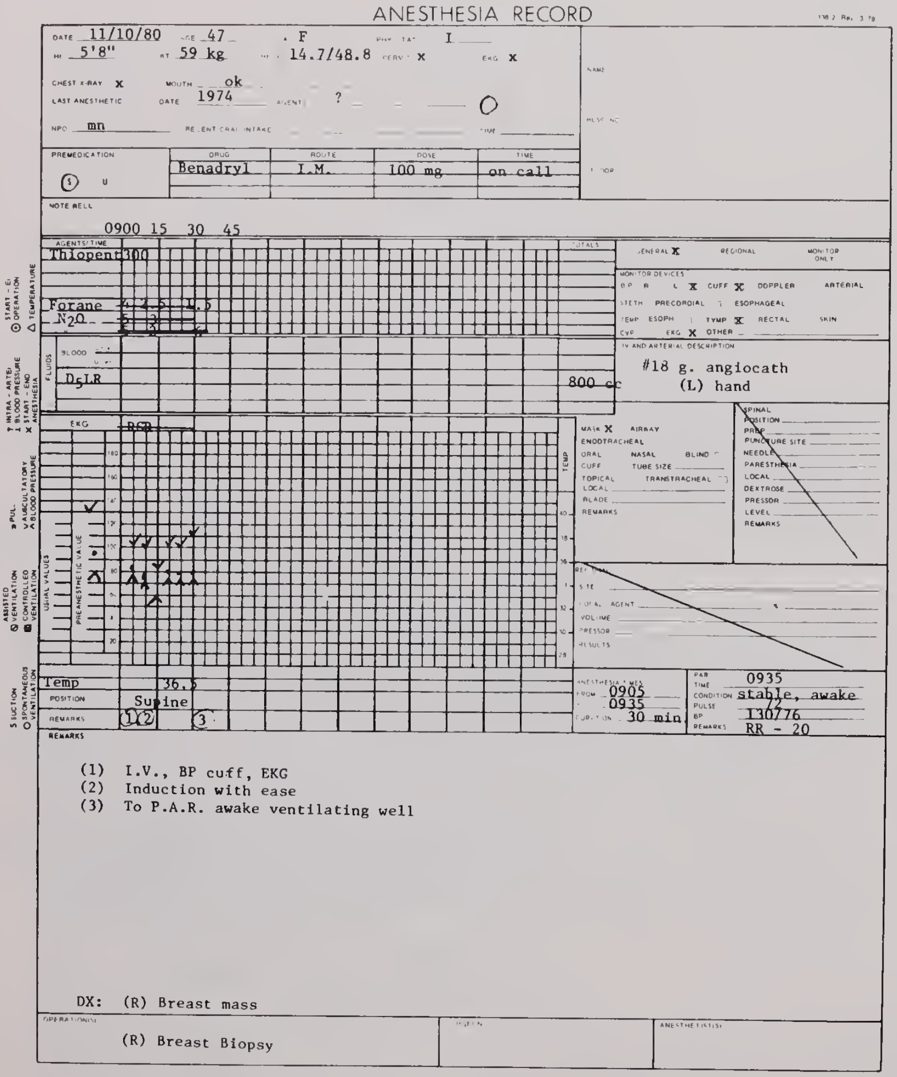
REMARKS
(1) Smooth induction N_2O/O_2/Isoflurane

x 1000
⊖ 1020
O 1035
x 1045

DX: (r) Inguinal herniorraphy

R.I.H.

Fig. 4



ANESTHESIA RECORD

DATE 11/10/80 AGE 47 F
HT 5'8" WT 59 kg 14.7/48.8 I
CHEST X-RAY X MOUTH ok EKG X
LAST ANESTHETIC DATE 1974 AGENT ?
NPO mn

PREMEDICATION: Benadryl I.M. 100 mg on call

0900 15 30 45

Thiopent 300
Forane
N_2O
BLOOD
D_5LR 800 cc
#18 g. angiocath (L) hand

Temp 36.5
POSITION Supine
REMARKS (1)(2) (3)

ANESTHESIA TIMES FROM 0905 TO 0935 DURATION 30 min
PAR TIME 0935 CONDITION stable, awake PULSE 72 BP 130/76 REMARKS RR - 20

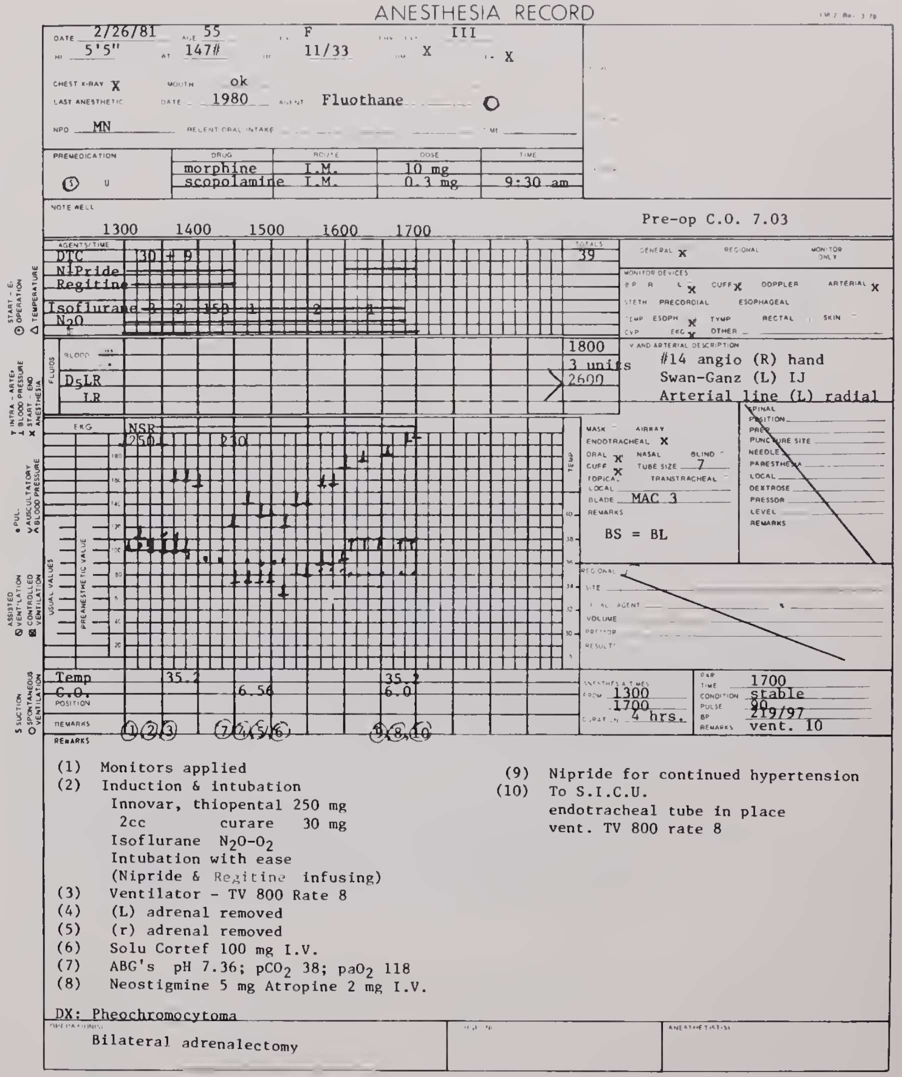
REMARKS

(1) I.V., BP cuff, EKG
(2) Induction with ease
(3) To P.A.R. awake ventilating well

DX: (R) Breast mass

OPERATION(S) (R) Breast Biopsy

Fig. 5



ANESTHESIA RECORD

DATE 2/26/81 AGE 55 F III
HT 5'5" WT 147# 11/33 X X
CHEST X-RAY X MOUTH ok
LAST ANESTHETIC DATE 1980 AGENT Fluothane
NPO MN

PREMEDICATION:
morphine I.M. 10 mg
scopolamine I.M. 0.3 mg 9:30 am

Pre-op C.O. 7.03

1300 1400 1500 1600 1700

DTC 30 + 9 — 39
NiPride
Regitine
Isoflurane 3 2 150 1 2 1
N_2O
BLOOD 1800 3 units
D_5LR
LR 2600
#14 angio (R) hand
Swan-Ganz (L) IJ
Arterial line (L) radial
NSR 250 210
BLADE MAC 3
TUBE SIZE 7
BS = BL

Temp 35.2 35.2
C.O. 6.56 6.0
REMARKS (1)(2)(3) (7)(4)(5)(6) (9)(8)(10)

ANESTHESIA TIMES FROM 1300 TO 1700 DURATION 4 hrs.
PAR TIME 1700 CONDITION stable PULSE 90 BP 219/97 REMARKS vent. 10

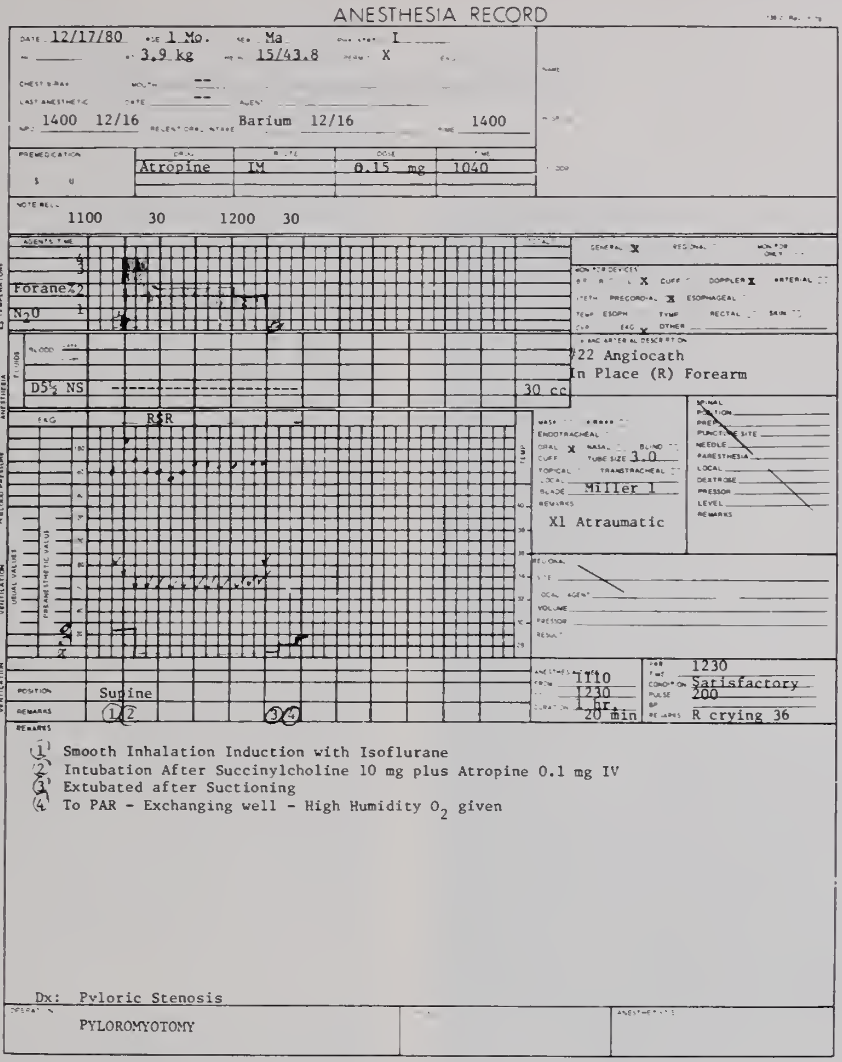
REMARKS

(1) Monitors applied
(2) Induction & intubation
Innovar, thiopental 250 mg
2cc curare 30 mg
Isoflurane N_2O-O_2
Intubation with ease
(Nipride & Regitine infusing)
(3) Ventilator - TV 800 Rate 8
(4) (L) adrenal removed
(5) (r) adrenal removed
(6) Solu Cortef 100 mg I.V.
(7) ABG's pH 7.36; pCO_2 38; paO_2 118
(8) Neostigmine 5 mg Atropine 2 mg I.V.
(9) Nipride for continued hypertension
(10) To S.I.C.U.
endotracheal tube in place
vent. TV 800 rate 8

DX: Pheochromocytoma

OPERATION(S) Bilateral adrenalectomy

Fig. 6



ANESTHESIA RECORD

DATE 12/17/80 AGE 1 Mo. SEX Ma I
3.9 kg 15/43.8 X

CHEST X-RAY MOUTH --
LAST ANESTHETIC DATE -- AGENT
1400 12/16 RECENT ORAL INTAKE Barium 12/16 TIME 1400

PREMEDICATION

DRUG	ROUTE	DOSE	TIME
Atropine	IM	0.15 mg	1040

NOTE WELL
1100 30 1200 30

Forane%
N₂O
D5½ NS 30 cc
RSR

GENERAL X
MONITOR DEVICES
X DOPPLER X
PRECORDIAL X
EKG X

ARTERIAL DESCRIPTION
#22 Angiocath
In Place (R) Forearm

ENDOTRACHEAL
ORAL X TUBE SIZE 3.0
BLADE Miller I
REMARKS
X1 Atraumatic

ANESTHESIA TIME
FROM 1110
TO 1230
DURATION 1 hr. 20 min

PAR TIME 1230
CONDITION Satisfactory
PULSE 200
REMARKS R crying 36

POSITION Supine
REMARKS ①② ③④

REMARKS
① Smooth Inhalation Induction with Isoflurane
② Intubation After Succinylcholine 10 mg plus Atropine 0.1 mg IV
③ Extubated after Suctioning
④ To PAR - Exchanging well - High Humidity O_2 given

Dx: Pyloric Stenosis
OPERATION
PYLOROMYOTOMY

Fig. 7

is seen when these agents are used for therapeutic abortions and therefore, they are contraindicated in this situation.[12] Herein the similarities end: isoflurane has a lower blood/gas and a lower oil/gas solubility than its sister anesthetics. As a result, we would expect a very rapid induction and emergence. Emergence is indeed more rapid by several minutes; induction is slowed somewhat due to the pungent odor that may precipitate breath holding if concentrations are raised rapidly.

Isoflurane's major advantage lies in its great cardiovascular stability that is illustrated so dramatically in our case reports. Over the range of 1-2 MAC, we saw no depression of myocardial contractility or cardiac output.[6] In case #1 (Fig. 1), for example, the patient actually had a higher cardiac output after induction of anesthesia than he did preoperatively. In Case #6 (Fig. 6) the patient also maintained a cardiac output which was nearly as high as her preoperative value. In spite of the polypharmacy necessarily involved in the management of a patient with pheochromocytoma, there is no doubt that isoflurane was in large part responsible for the preservation of cardiac output. This stability has not previously been seen by us with any other potent inhalation anesthetic.

Cardiac rhythm remains amazingly stable with isoflurane, even in the presence of elevated catecholamines,[13] again illustrated by Case #6 (Fig. 6). Here our patient with pheochromocytoma undergoing adrenalectomy had a normal sinus rhythm throughout the case. Again, this has not been our experience with other potent inhalation agents even when full beta-blocking doses of propranolol have been administered.

It is because of the rhythm stability and the absence of myocardial depression that isoflurane was chosen as the anesthetic for the patient in Case #2 with a history of both congestive heart failure and ventricular tachycardia (Fig. 2). Her anesthetic course was uneventful.

It must be stated that isoflurane may not be a panacea for the cardiac patient. Indeed, in early clinical trials of this drug, one of the authors experienced several cases of tachycardia ranging from 20% to 100% over baseline. This was obviously not a problem in the cases presented here. Results of a recent multi-institutional trial of isoflurane show a mean pulse rate increase of four beats per minute in a population sample of 3,000 patients. A few isolated cases of profound tachycardia responded well to either supplemental fentanyl or a small dose 0.1 mg of propranolol.[14]

Perhaps the most outstanding advantage of isoflurane is its significant lack of metabolism, 0.17% of an administered dose.[4] This, coupled with the physical stability of isoflurane, suggests it should have little or no hepato-toxic or renal toxic effects. In fact, volunteer studies have supported this conclusion.[15] This, together with the excellent muscle relaxation provided by isoflurane, is what led us to choose the agent for our renal transplant patient in Case #3 (Fig. 3). Hepatitis and recurrent renal damage are significant problems in this patient population. In addition, the clearance of muscle relaxants may be impaired. Due to the enhanced muscle relaxant properties of isoflurane, the minimal amount of muscle relaxant was required. Both the intraoperative and postoperative course of this patient were smooth. The effects of the muscle relaxant were reversed and the patient was extubated in the operating room.

If there is a problem in the use of isoflurane, it is perhaps in the pungency of the drug. Inhalation inductions in both adults and children have been said to be associated with coughing, breath-holding and laryngospasm. Cases #4, #5 and #7 illustrate that, indeed, it is possible to have smooth inductions and maintenance of spontaneous ventilations in both the pediatric and the adult groups (Figs. 4, 5 & 7). This is not to say that we have never seen coughing, breath-holding and laryngospasm in our patients. Philosophically, our experience in this regard can perhaps be divided into three periods.

During the initial period, our unfamiliarity with the drug led us to proceed slowly and methodically with such inductions and our initial experience was very good with a minimum of coughing, etc. Our middle period can be characterized by a feeling of confidence and familiarity with the drug. This led us to advance more rapidly with anesthetic concentrations during induction. It was in this period that we encountered coughing and laryngospasm. In the third period, we have gained additional experience in the use of isoflurane, have again returned to slow, methodical inductions and now experience fewer difficulties.

Case #4 is also interesting in that it illustrates the safe use of the agent in an outpatient setting.

The patient in Case #7 at one month of age is the youngest patient in our series and helps to illustrate the safe use of isoflurane in the extremes of age, in our small series: one month to 82 years.

In conclusion, we have found isoflurane to be a safe and versatile, new anesthetic agent. Its major advantages, we feel, are its preservation of cardiac output and rhythm stability and, secondly, its limited metabolism. Its disadvantages include a pungent odor that necessitates slow methodical induction techniques. In addition, some propensity to increase the heart rate, on occasion profoundly, seems to be a rare occurrence and has been dealt with successfully by using small doses of propranolol or supplemental fentanyl. Overall, we believe that the advantages of isoflurane far outweigh its disadvantages.

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VODUR C. REDDY, M.D., *Joplin*

'A Clever Surgical Innovation'

This unusual case description demonstrates the various uses of Fogarty catheters in urological practice, especially when conservative management is ineffective.

Dr. Reddy is in the private practice of urology.

A 70-YEAR-OLD WHITE WOMAN was admitted to the hospital with a history of right flank pain that radiated to the groin. Urinalysis showed microscopic hematuria. Because the patient was allergic to contrast material, a cystoscopy and right retrograde pyelogram were performed. During the procedure, the proximal half of the ureteral catheter broke loose and stayed in the ureter.

Conservative management was ineffective. An x-ray showed the catheter to still be lodged in the ureter (Fig. 1). Cystoscopy failed to show the broken end of the catheter at the ureteral orifice. A Fogarty catheter was then passed alongside the broken catheter and past the proximal tip of the ureteral catheter. The balloon of the Fogarty catheter was inflated and the Fogarty catheter was gradually pulled out of the orifice. With this maneuver, the ureteral catheter slipped out of the orifice into the bladder. The ureteral catheter was then extracted from the bladder with the help of a biopsy forceps.

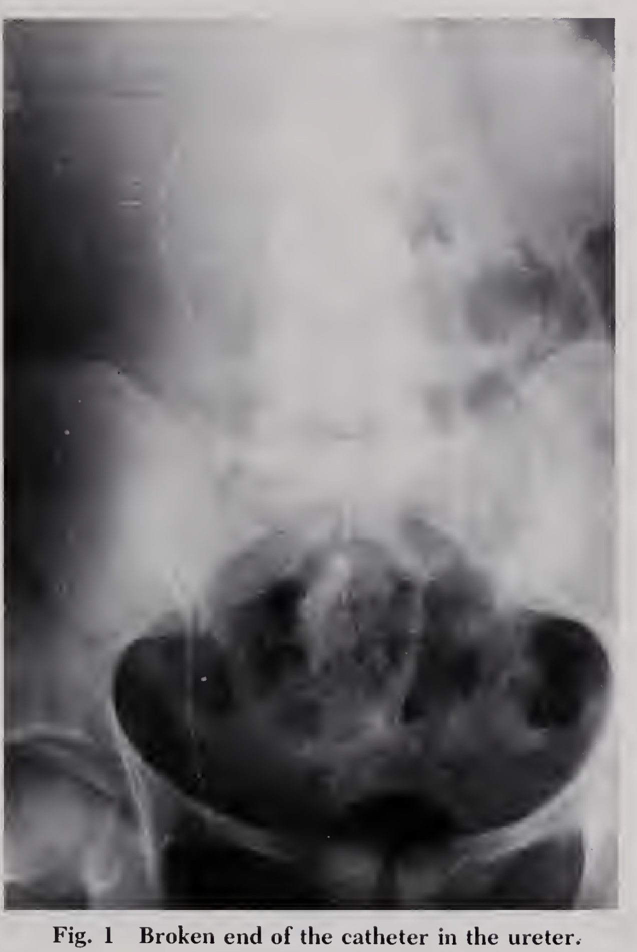

Fig. 1 Broken end of the catheter in the ureter.

Discussion

This exercise demonstrates the usefulness of Fogarty catheters in urology. The various uses of Fogarty catheters in urological practice are as follows:

1. To occlude ureteral orifices in vesicoureteral reflux, for formalin instillation into the bladder
2. To remove foreign bodies from the urethra
3. To extract foreign bodies from the ureter.

MATT H. BACKER, JR., M.D. *and*
RAYMOND E. PROBST, M.D., *St. Louis*

Carcinoma of the Uterine Fundus

Current Status and Review of 70 Cases

A TOTAL OF 70 CASES of carcinoma of the uterine fundus managed in a two-man private practice over the past 20 years was reviewed. Of interest is the fact that of 70 cases, 54 were diagnosed and treated since 1971. This reflects the well-publicized increase in the frequency with which this lesion is being diagnosed. Before the results of this review are presented current concepts about endometrial cancer follow:

INCIDENCE

The incidence of endometrial malignancy has doubled in the last 15 years and is now the same as that of cancer of the cervix.

CAUSES

Etiologic factors include constitutional predisposition (the burgeoning somatotype), unopposed estrogen stimulation of the endometrium and longer life. The role of therapeutic estrogen has been the object of considerable study over the last few years, the general conclusion being that the risk of fundal cancer is 4.5 to 14 times greater in estrogen users[1, 2] and the frequency of malignant change increases with larger doses[3, 4] and longer periods of use.

The authors review current concepts of the incidence, causes, diagnosis, staging and treatment of endometrial cancer. The role of estrogen replacement is noted as well as guidelines for its safe use. The liberal use of endometrial biopsy for diagnostic screening and monitoring is recommended. Of 70 patients with fundal cancer in their practice, 69% had Stage I lesions and none died from the disease.

Drs. Backer and Probst are in the private practice of obstetrics and gynecology.

This paper was originally presented at a Tumor Conference at St. Anthony's Medical Center in St. Louis on June 5, 1981.

Other observations are that estrogen use for less than 3½ years confers no increased risk[5] and that cancers seen in estrogen users are more highly differentiated, less invasive and more curable.[6] These observations have led to a careful reappraisal of the risk/benefit ratio in prescribing estrogens. An excellent evaluation by Judd *et al* was recently published. It offers guidelines for estrogen replacement.[7]

The judicious use of estrogen therapy over controlled periods of time is still an excellent treatment for severe menopausal vasomotor disturbances, atrophic vaginitis and especially osteoporosis. However, patients given estrogens must be kept under close surveillance with prompt endometrial sampling should any abnormal bleeding occur.[8]

DIAGNOSIS

The diagnosis of fundal cancer can be made only by sampling endometrial tissue. It cannot be made by cytologic screening. Papanicolaou smears are inadequate for either diagnosing or ruling out endometrial cancer. Securing tissue by means of fractional curettage or by endometrial biopsy is absolutely essential. In our 70 cases, the diagnosis was established by dilatation and curettage (D&C) in 51 and by endometrial biopsy in 12. The other seven were diagnosed incidental to other surgical procedures, such as vaginal hysterectomy for prolapse or abdominal hysterectomy for fibroids. Like other gynecologists, we have used endometrial biopsy more frequently in recent years. Fractional samples can (and should) be taken from the endocervix and endometrium with the endometrial biopsy curette. The uterus should also be sounded at this time to assist in staging the lesion should the biopsy prove positive. We have found that injecting 2 ml of a local anesthetic agent paracervically at 5 and 7 o'clock with a dental needle makes endometrial biopsy much more acceptable (Fig. 1).

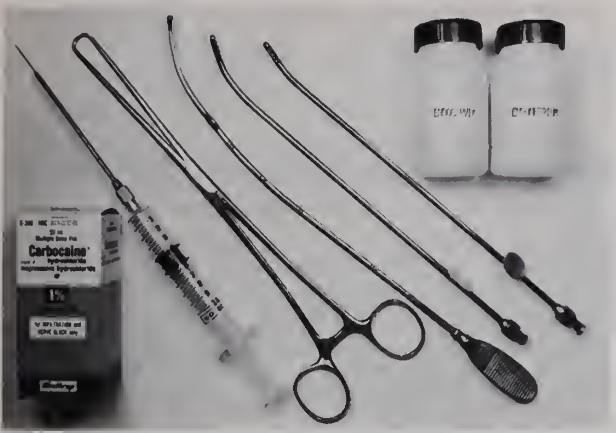

Fig. 1 Office equipment for endometrial biopsy.

Staging is done according to the International Federation of Gynecology and Obstetrics (FIGO) criteria, as follows:

Stage I — Confined to the corpus
IA — Cavity 8 cm or less
IB — Cavity more than 8 cm
Stage II — Involves corpus and cervix
Stage III — Outside the corpus, but not outside the pelvis nor in the bladder or rectum
Stage IV — Outside the pelvis or in the bladder or rectum

Histologic subgroups:

G1 — Highly differentiated and adenomatous
G2 — Differentiated but with solid areas
G3 — Predominantly solid or undifferentiated

The prognosis for five-year cure by stage is twice as favorable as for cervical malignancy. The following rates are reported for fundal cancers:

Stage I — 85%-90%
Stage II — 50%-65%
Stage III — 30%
Stage IV — Under 10%

Deep myometrial invasion is associated with positive nodes ten times as frequently as more superficial lesions (31% vs 3%); over all, 10% of Stage I and 30% of Stage II patients have positive nodes.

TREATMENT

The treatment of endometrial cancer is surgical and is usually total abdominal hysterectomy and bilateral salpingo-oophorectomy. Adjunctive radiation is used for more advanced lesions to reduce tumor size, sclerose and sterilize lymphatics and nodes and to render the vagina less susceptible to tumor implantation.

There are several protocols for the treatment of endometrial cancer but most include these modalities:

Stage IA-GI: Total abdominal hysterectomy with bilateral salpingo-oophorectomy.

All other operable cases: radiation (4,800 rads to the uterus, adnexae and upper vagina) followed by total abdominal hysterectomy and bilateral salpingo-oophorectomy.

Advanced local disease:
Whole pelvis irradiation
Disseminated disease:
Progestagens — Depo-Provera, 1 gm per week intramuscularly or Megase, 80 mgm per day, PO
Alkylating agents — Adriamycin/Cytoxan

REVIEW

The review of our 70 cases can be summarized as follows. The average age of patients was 58.6 years, 42 were obese, 27 hypertensive and 13 were diabetic.

STAGING

The staging of our patients' disease is recorded (with an annotation as to how many were estrogen users) in Table 1:

TABLE 1

Stage	0	2	2*
Stage	I	55	8*
Stage	II	3	
Stage	III	6	
Stage	IV	1	
	(Sarcomas 3)		

* Estrogen users.

TREATMENT AND SURVIVAL

This information is reviewed in Table 2.

SUMMARY AND CONCLUSIONS

1. The incidence of endometrial cancer is increasing.
2. Tissue sampling is essential for its diagnosis.
3. Endometrial biopsy is a simple, inexpensive office procedure that is useful in diagnosing endometrial cancer and monitoring women placed on estrogen therapy.
4. Replacement estrogens increase the risk of fundal cancer, but this risk can be minimized by low dosage over controlled periods of time and by careful monitoring.

TABLE 2

Stage I		Deaths 3	
TAH/SO	38	Old Age (81)	1
PREOP RT		Carcinoma of breast	1
TAH/SO	8	Homicide	1
TAH/SO		Of fundal carcinoma	0
POST OP RT	2		
VH/SO	6		
PREOP RT			
VH/SO	1		
Stage II		Deaths 2	
TAH/SO	1	Disease	1
TAH/SO		Pulmonary embolus	1
POST OP RT	2		
Stage III		Deaths 2	
TAH/SO		Both of disease	
PREOP RT	2		
TAH/SO		4 alive, 2 with disease	
POST OP RT	4		
Stage IV		Deaths 1	
RT	1		
Sarcomas		Deaths 1	
TAH/SO	2		
RT	1		

5. It is noteworthy that 55 of our 70 cases were Stage I and that none of these patients died of endometrial cancer.

6. This review suggests that the majority of patients with endometrial cancer can be successfully managed by the private gynecologist with referral of advanced cases to tertiary centers.

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Please Note the Following Addendum:

At the request of the author, MISSOURI MEDICINE directs your attention to the following addendum to the article, "Interdisciplinary Care for Craniofacial Deformities," which was published in the September, 1982 issue (Vol. 79, No. 9):

ADDENDUM

Due to an oversight, the discipline of neurosurgery was omitted from Table 1 listing the disciplines represented on the Craniofacial Deformities Team. The participation of the neurosurgeon both for preoperative and postoperative evaluation as well as intraoperatively for cranio-orbital procedures is essential for safe, effective management of patients with craniofacial disorders.

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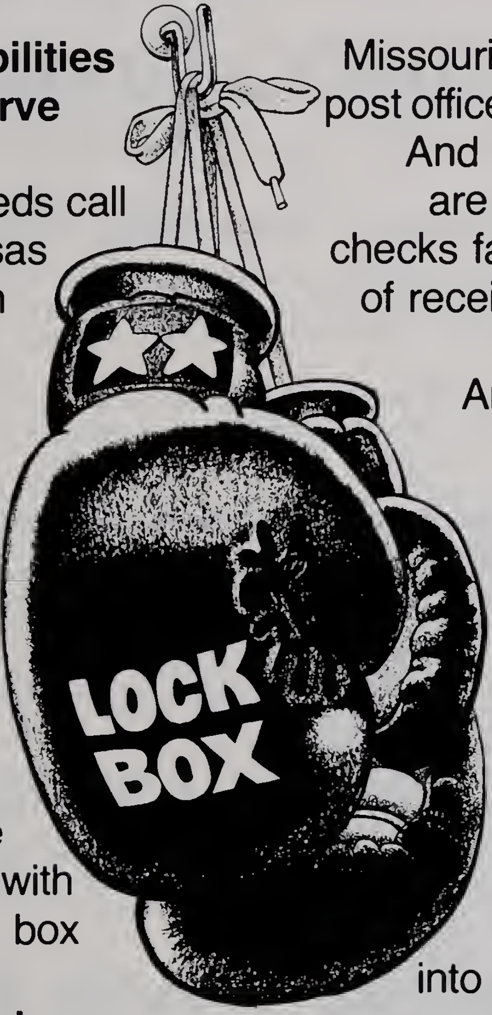

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President's Message

AM I MY BROTHER'S BROTHER?

The holiday season is here rich in tradition. Family gatherings, visits from friends, cards, letters, phone calls from those at a distance, the special music of this time of year — all contribute to the festivity. And as the year end is at hand, it is a time for summing up. Who am I? Why did I become a physician? Where am I going? What are my goals?

The public image of the physician as a warm, concerned, friendly, caring individual is a heritage won by the efforts of thousands of our predecessors. Much of this was earned by care for rich and poor alike regardless of ability to pay. It still is, but there are problems. All physicians with whom I have discussed indigent care maintain that they give care to each individual regardless of ability to pay, and I am sure, this is true. However, when pressed for details, a large number state that they do not take Medicaid patients, but do take care of indigents on an individual basis. How often is that? Well, "as need be" or "from time to time." Further discussion reveals that they have been "advised" by their accountant, lawyer, business advisor-office manager in the office not to take Medicaid patients because of potential dollar loss on time spent.

John I. Matthews, M.D.

The poor will always be with us. They need our help. Doctor, what percentage of your time contributes to their care? Is Medicine a profession or strictly a business? Who makes the decision about care of people in your office — you or your "advisor"? It is a time of year for summing up. Am I my brother's brother?

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MSMA Auxiliary

My guest columnist this month is Mrs. W. C. Dandridge, our MSMA Auxiliary AMA-ERF chairman who points out the benefits derived by both the giver and receiver of these funds. Since the AMA Auxiliary awards are based only on contributions that are made directly through the MSMA Auxiliary, may we suggest that you channel your AMA-ERF gifts through your local auxiliary. If your component society does not have an organized auxiliary, we urge you to send your contribution directly to the state chairman at the address listed below. Thank you for sharing in this joint endeavor.

Lillian Gaston

Mrs. Sam Gaston
President

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AMA-ERF is the only charity sanctioned by the AMA Auxiliary. The money that is contributed through your MSMAA state chairman may be given to the medical school of your choice in your name. No money is used for operation expenses of this foundation. Every dollar goes to the school designated by the donor.

According to letters from the deans of medical schools that received AMA-ERF funds in 1981-1982, the money will be used for student research projects, summer research fellowships for students, basic research project, faculty recruitment, curriculum planning, student education seminars, research equipment and supplies, teaching equipment and interdepartmental organ systems course materials.

Virtually all gifts to medical schools are distributed in the first quarter after the close of the year, as soon as the books are closed and checks can be prepared.

The MSMA Auxiliary contributions totaled $12,948.34 and the physicians' contributions totaled $8,879.00.

The grand national total for the AMA-ERF in 1981-1982 is $1,742,913.68. I do urge all MSMA members to donate through their component medical society auxiliaries. It helps the MSMA Auxiliary's total when they attend the AMAA Convention.

Your contribution can help a medical school upgrade its teaching standards. Your Contribution Does Matter!

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In the treatment of insomnia

Good mornings start with restful nights.

Dalmane *(flurazepam HCl/Roche)* patients fall asleep faster, sleep longer and seldom awaken with morning hangover.

Feeling well rested in the morning usually means having slept well the night before. And for insomniac patients receiving hypnotic therapy, a good morning also means awakening with few side effects from their medication. Many physicians choose Dalmane for their patients who suffer from insomnia for this very reason.

Aside from enabling patients to fall asleep more quickly and sleep longer, Dalmane seldom causes morning hangover. Most Dalmane patients feel alert and refreshed when they awaken. In 53 paired-night clinical studies comparing Dalmane and placebo in 2010 insomniac patients with a variety of secondary diagnoses, most Dalmane patients awakened more alert and refreshed, and less groggy and drowsy, than on nights when they had taken only placebo.[1] In a double-blind crossover study of 42 patients in private practice, approximately three times as many patients reported feeling refreshed and alert upon awakening after a night on Dalmane (flurazepam/Roche) compared to placebo nights.[2] This difference was highly significant ($p<0.001$). And a retrospective study of 2542 hospitalized patients who received Dalmane revealed only a 3.1% incidence of side effects.[3]

While residual effects from Dalmane therapy are infrequent, patients should be cautioned about drinking alcohol, driving or operating hazardous machinery after ingesting the drug.

Efficacy and safety in a broad range of patient types.

Over 2000 clinical trials involving more than 10,000 patients have shown that Dalmane patients fall asleep sooner, sleep longer and experience fewer nocturnal awakenings.[4] The safety and efficacy of Dalmane have been demonstrated in medical and surgical hospitalized patients, in patients seen in office practice and in elderly patients.[5-8] Since the risk of oversedation, dizziness, confu-

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Contemporary Hypnotic Therapy '82

sion and/or ataxia increases with larger doses in the elderly, it is recommended that the dosage be limited to 15 mg.

Moreover, the efficacy and safety of Dalmane for the treatment of insomnia have been demonstrated in thousands of patients with a variety of primary medical conditions, including cardiovascular, neuropsychiatric, endocrine-metabolic, gastrointestinal, genitourinary, respiratory and musculoskeletal disorders.[1] Dalmane (flurazepam HCl/Roche) is contraindicated in pregnancy and in patients hypersensitive to the drug.

Avoids rebound insomnia upon discontinuation.

Rebound insomnia—a worsening of sleep beyond pretherapy levels after drug discontinuation—has been reported as a potential clinical problem with some hypnotics.[9,10] However, this problem has not been reported with Dalmane. In eight out of eight sleep laboratory studies, there were no reports of rebound insomnia.[11] When you prescribe Dalmane, you can be confident of efficacy that enhances therapeutic progress. Your insomniac patients can be assured of a restful night, night after night—a good start for a good morning.

References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **4.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Meyer JA, Kurland KZ: *Milit Med 138*:471-474, Aug 1973. **6.** Feffer HL, Gibbons B: *Med Times 101*(8):130-135, Aug 1973. **7.** Jacobson A *et al: Psychophysiology 7*:345, Sep 1970. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 1978. **10.** Kales A *et al: JAMA 241*:1692-1695, Apr 1979. **11.** Monti JM: *Methods Find Exp Clin Pharmacol 3*(5):303-326, 1981.

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flurazepam HCl/Roche
15-mg/30-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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MSMA Members Receive Physician's Recognition Award

Forty-three MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of September, 1982.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

Rogelio L. Bautista, Moberly
Lanny R. Brent, Springfield
Charles J. Brook, Kansas City
Edmond B. Cabbabe, St. Louis
Galileu Cabral, Chesterfield
Samuel A. Canaan, St. Louis
Raymond A. Christy, Springfield
Michael S. Clarke, Springfield
Nicholas J. Colosi, St. Louis
Joseph A. Costrino, St. Louis
William L. Fair, Chillicothe
Michael S. Fedotin, Kansas City
LeRoy L. Fink, St. Louis
Louis H. Forman, Kansas City
Jerome J. Gilden, St. Louis
William M. Hart, St. Louis
Jack Hartstein, St. Louis
Walter H. Jacobs, Kansas City
Ijaz A. Jatala, St. Louis
Eustace E. King, Ferguson
Frederick T. Kraus, St. Louis
Norton S. Kronemer, St. Louis
Steven K. Krueger, St. Joseph
Arnoldo Kuczer, Chesterfield
France A. Laux, St. Louis
William V. Leary, Poplar Bluff
Bruce I. Lieberman, Kansas City
Piemsak Lim, Des Peres
Sivaprasad D. Maddouri, Poplar Bluff
Julio Morales, Clayton
Gary H. Myers, Chesterfield
Jeffrey A. Nerad, St. Louis
Donald L. Oetter, St. Louis
Joseph A. Roy, Bridgeton
John P. Schutz, Excelsior Springs
Fredric M. Simonwitz, St. Charles
John B. Stoliar, Florissant
George P. Stricklin, St. Louis
Clement J. Sullivan, St. Louis
Edith S. Trugly, St. Louis
William Winkler, St. Louis
R. Paul Wright, Kansas City

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category 1 credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: **Alta Bingham**

Dec. 2-4	The Heart 1982 (Alameda Plaza Hotel)
(1983)	
Jan. 15-22	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 11-12	The Long Weekend: Update in Infectious Disease, Orthopedics and Pharmacology (Crown Center Hotel)
Feb. 12-19	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Ixtapa, Mexico)
March 10-12	Perspectives in Medical Care (Hyatt Regency Hotel)
March 19-26	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Snowmass, Colo.)
April 21-23	Update in Obstetrics and Gynecology (Hyatt Regency Hotel)
May 12-13	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
May 20-21	The Long Weekend (Alameda Plaza Hotel)
June 4	Physical Fitness (Crown Center Hotel)

Washington University
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 454-3873
Contact: **Loretta Giacoletto, Office of CME**

Nov. 18-20	Clinical Allergy for the Practicing Physician
Dec. 3-4	Low Back Pain
(1983)	
Jan. 9-14	Practical Management of Patients With Infectious Diseases (Keystone, Colo.)
Feb. 5-11	1983 Care of the Aging Patient (Cancun, Mexico)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 367-2131
Contact: **Ronald G. Evens, M.D., Director**

Dec. 13	City-Wide Radiology Conference — Arteriography and Interventional Radiology
(1983)	
Jan. 10	City-Wide Radiology Conference (St. Louis University)
Feb. 14	City-Wide Radiology Conference — CT Experience from an English Cancer Center
Mar. 14	City-Wide Radiology Conference — New Approaches to Measuring Cardiac Function in Nuclear Radiology
Apr. 11	Leroy Sante Lecture (St. Louis University)
May 9	City-Wide Radiology Conference — Pediatric Radiology
May 6-14	Fifth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (With Inter-American Congress of Radiology) (Acapulco)

The Ed Bixby Institute Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4306
Contact: **Jane L. Jackson, Director of Seminars**

Dec. 1	Common Neurologic Problems
(1983)	
Feb. 2	Infectious Diseases and Antibiotics
Apr. 6	Acute and Chronic Pain Management
June 1	Pulmonary Disease: Critical Care
Aug. 3	New Radiology Techniques

American College of Physicians
4200 Pine St., Philadelphia, PA 19104
(215) 243-1200
Contact: **Jane A. Ayers**

(1983)	
Feb. 25-26	Regional CME Meetings (Alameda Plaza Hotel, Kansas City)

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Notes of interest from Here . . . . and There

Dr. Charles A. Worley of Sweet Springs was recently elected to a three-year term on the Board of Directors of the American Academy of Family Physicians (AAFP). The AAFP is the nation's largest specialty organization. Dr. Worley has served on several AAFP commissions and committees and has been chairman of the Subcommittee on Practice Management and the Subcommittee on Rural Health. He has just completed a three-year term on the Academy's Commission on Health Care Services. He is a diplomate of the American Board of family practice and has served as president and chairman of the Board of Directors of the Missouri Academy of Family Physicians. He was a member of the Board of Governors of the University of Missouri Medical Alumni Association from 1969-1976. Dr. Worley also is a preceptor in Community Health and Medical Practice at the University of Missouri-Columbia School of Medicine.

The Associates in Medicine of The Jewish Hospital in St. Louis recently welcomed the **Rev. Bill Little**, counseling psychologist and popular celebrity of KMOX Radio, to discuss "Family and Marriage Relationships" as part of a community service to interpret technology and practice as it relates to patient care, medical education and medical research.

Dr. George Ladyman of Poplar Bluff was honored for his past service as chairman of Southeast Missouri Professional Standards Review Organization at the recent annual membership banquet in Cape Girardeau. **Dr. Gene Ruff** was elected as a member of the executive board of the organization for 1982-1983. Other officers are **Dr. James Armantrout** of Farmington, chairman; **Dr. William Booth** of Dexter, vice-chairman; **Dr. R. E. Marts** of Ste. Genevieve, secretary; and **Dr. Allen Spitler** of Cape Girardeau, treasurer.

Dr. Thomas M. Foy of Hillsboro, pediatrician at the Community Health Center for Jefferson County, Inc., received a national award recently at the annual meeting of the National Health Service Corps physicians held in Snowbird, Utah for outstanding service as a member of the Service Corps serving the citizens of Jefferson County. It is reported that the award is given to less than 1% of the physicians serving in the Corps program.

Officers for The Greater Saint Louis Society of Radiologists for 1982-1983 are **Drs. Peter A. Diemer**, president; **Christopher J. Moran**, vice-president; **E. Richard Graviss**, secretary-treasurer; and **Gene L. Davis, Jr.**, membership committee chairman.

Hugh R. Walters, M.D. of St. Louis was honored recently when he received a special recognition award from the American Society of Internal Medicine.

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* 1952 Intercompany Disability Table, Benefit 2, Age 35

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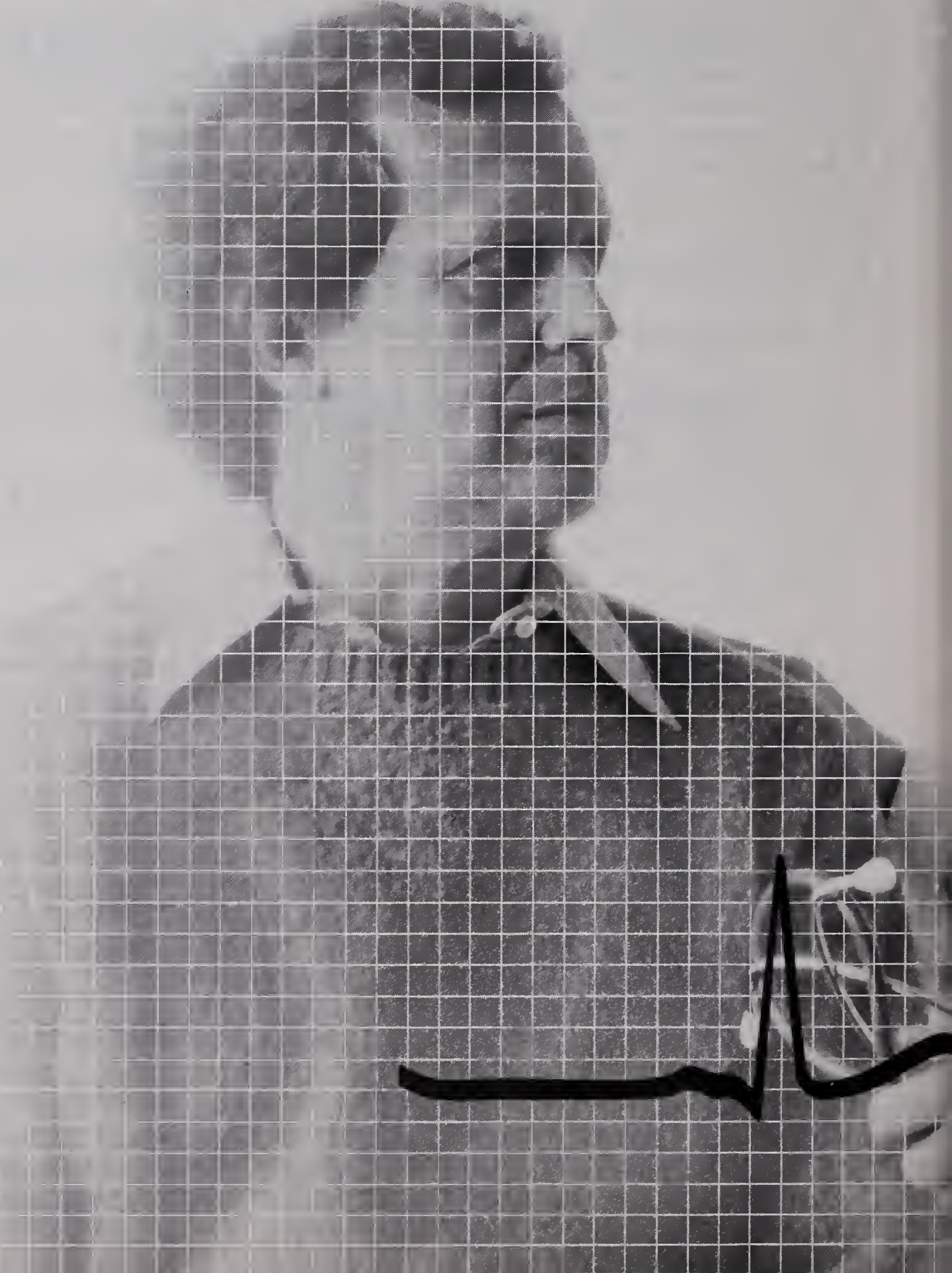

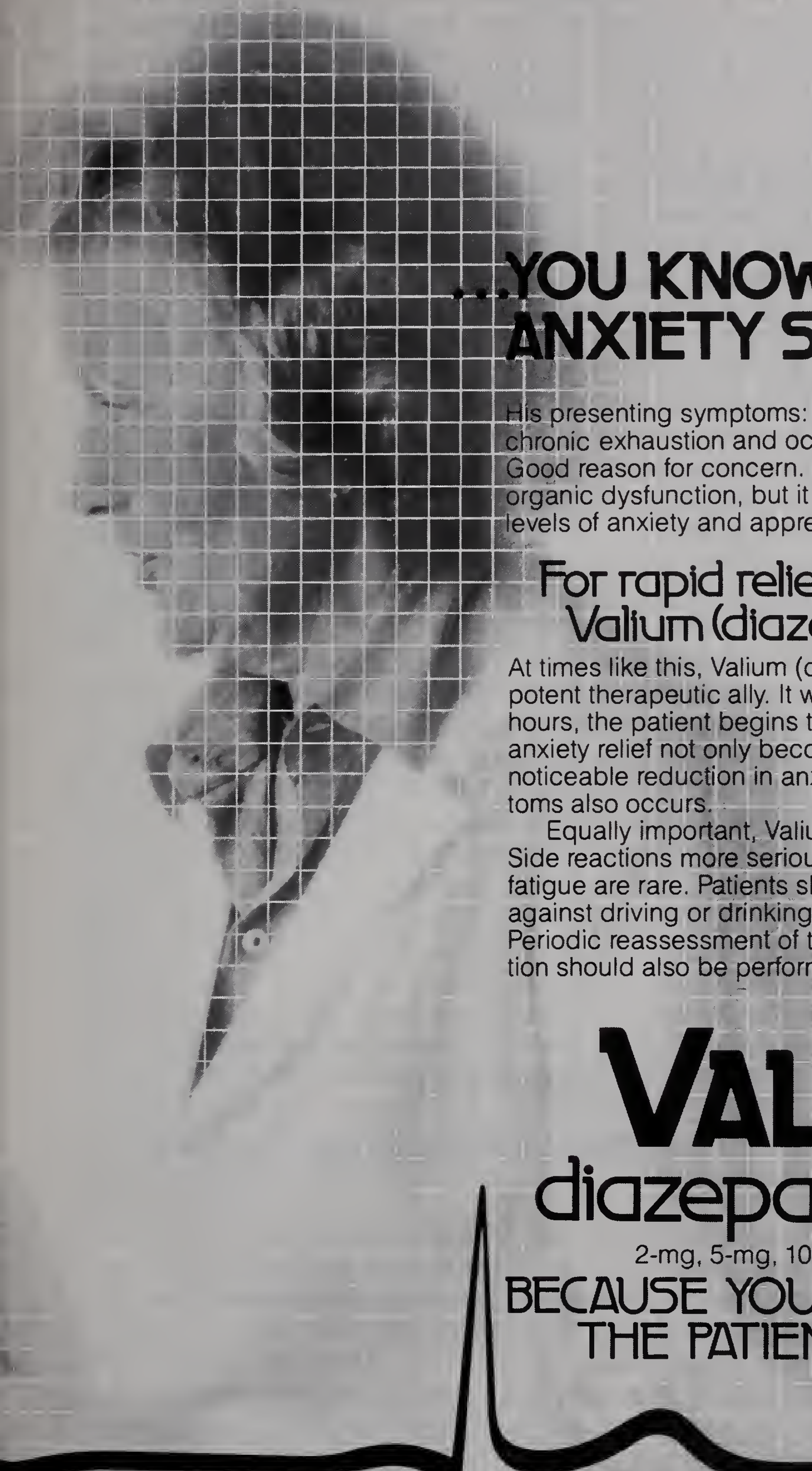

...YOU KNOW IT'S REALLY ANXIETY SYMPTOMS

His presenting symptoms: palpitations, chest pain, chronic exhaustion and occasional difficulties in breathing. Good reason for concern. A complete workup uncovers no organic dysfunction, but it *does* reveal excessively high levels of anxiety and apprehension.

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At times like this, Valium (diazepam/Roche) can be a potent therapeutic ally. It works promptly. Within just a few hours, the patient begins to feel calmer. And in a few days, anxiety relief not only becomes more pronounced but a noticeable reduction in anxiety-generated somatic symptoms also occurs.

Equally important, Valium is generally well tolerated. Side reactions more serious than drowsiness, ataxia and fatigue are rare. Patients should, of course, be cautioned against driving or drinking alcohol while on Valium therapy. Periodic reassessment of the need for antianxiety medication should also be performed.

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VALIUM®(diazepam/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal, adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
How Supplied: For oral administration, Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100* and 500.* Prescription Paks of 50, available in trays of 10.* Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25,† and in boxes containing 10 strips of 10.†

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NEWS
From the Medical Schools

ST. LOUIS UNIVERSITY

Paul N. Duckro, Ph.D., has been named assistant professor of psychiatry in the Division of Behavioral Medicine. In conjunction with his academic position, he will serve as director of the Biobehavioral Therapy Program.

Dr. Duckro

Dr. Duckro is from the John Cochran Veterans Administration Medical Center where he assisted in the development of the health psychology program. Prior to that he worked at Malcolm Bliss Mental Health Center in a variety of clinical and teaching roles.

In the biobehavioral laboratory, Dr. Duckro will focus on evaluation and treatment of psychophysiological disorders characterized by physical symptoms. He will also see patients for anxiety management using behavioral and relaxation therapies and work with psychological aspects of coping with chronic illness. *Alice D. Kitchen*, M.D. and *Robert M. Woolsey*, M.D., will provide medical consultation for the biobehavioral laboratory.

Dr. Duckro earned his doctorate at Texas Tech University in Lubbock. He completed his clinical internship at the Pittsburgh Veterans Administration Center.

Two medical center physicians presented papers at The Radiological Society of North America's 68th Scientific Assembly and Annual Meeting. *Elisabeth Heiberg*, M.D., assistant professor of radiology, discussed "CT Findings in Aortic Trauma." *Michael K. Wolverson*, M.B.B.S., associate professor of radiology, presented "Characterization of Hematomas of Recent Onset by Body Computed Tomography."

The Society's annual scientific assembly is the largest medical meeting in the world and attracts 35% of the radiologists in the United States and Canada, along with a large international participation.

Through Doctors House Calls, a new service sponsored by St. Louis University Hospitals, quality health care is as easy as "opening the front door."

This unique program will reach out beyond the doctor's office and the emergency room, providing health care whenever it is needed in the homes of St. Louis city and county residents. Operating 24 hours a day, 365 days a year, Doctors House Calls care includes treatment of minor emergencies, writing prescriptions, physical examinations, and, if hospitalization is required, the appropriate arrangements will be made by the Doctors House Calls physician.

Under the supervision of St. Louis University Hospitals, licensed medical doctors will be on call to provide health care services to families, guests at St. Louis area hotels, nursing home residents and clients of local insurance agencies. This service will also benefit private physicians who can sign out to the House Calls service during weekends, vacations and off hours.

Fully trained personnel will answer Doctors House Calls phone lines and ask a few brief questions regarding the illness and the location of the person needing a physician. Upon completion of the visit, a detailed report is sent to the patient's regular physician. A set fee is charged for each patient's visit, costing less than an emergency room visit.

Programs such as Doctors House Calls are currently in successful use in several cities throughout the country.

In the tradition of excellence in health care and in the spirit of growth, the Doctors House Calls program was designed to accompany the Hospitals' responsibility in promoting and improving good health, as well as restoring it.

UNIVERSITY OF MISSOURI-KANSAS CITY

Arthur L. Ulene, M.D., chairman of Cable Health Network and health consultant for NBC's "Today" show, greeted Year-1 medical students and their parents at the School of Medicine's fifth annual convocation on October 10.

In his address, "The Future in Medicine: Health Education," Dr. Ulene told students that medicine is changing rapidly and that the public is demanding more and more health care information from television and the electronic media.

Dean Harry S. Jonas, *Chancellor George A. Russell* and *Dr. E. Grey Dimond*, consultant to the chancellor, also spoke briefly. Dr. Jonas presented the Richard T. Garcia Memorial Award for compassion, academic performance and leadership to Robert Levin, second-year student.

The medical school's performing group, the "On Call Singers," provided entertainment for the audience.

"Women in Green" was the subject of the 1982 Distinguished Lectureship at the medical school. Sponsored by the St. Louis Friends of the UMKC School of Medicine, the lectureship was created to bring distinguished speakers in health-care fields to the school. *Dr. Jessie L. Ternberg*, professor of pediatrics and surgery and chief of the Division of Pediatric Surgery at Washington University in St. Louis delivered the lecture on September 30.

Dr. F. S. Yeh, dean and president of Guangxi Medical College in Nanning, China, visited UMKC's health science schools for three days in late September. An internationally known cancer specialist, Dr. Yeh spoke at the medical school on his research on etiological factors of hepatocellular carcinoma in Guangxi, China.

Steven B. Miller and *Craig K. Reiss*, both sixth-year medical students, have received awards from the St. Louis Friends of the UMKC School of Medicine. Mr. Miller received this year's research award. Mr. Reiss's award was for achievements in the basic sciences.

Kim C. Wade, Year 3, presented a paper on "Opening of Cyclitol Epoxides by Organic Phosphates" at the national meeting of the American Chemical Society in Kansas City in September. *Anthony J. Hancock*, Ph.D., associate professor of medicine and chemistry, co-authored the paper.

Richardson K. Noback, M.D., senior docent and professor of medicine, participated in a panel discussion of "Government Decisions in Health Care" at Family Health Day on September 27 in Independence. Other members of the panel were *U.S. Senators Thomas Eagleton* and *John Danforth*, and *Missouri Senator Harriett Woods*.

WASHINGTON UNIVERSITY

The National Heart, Lung and Blood Institute has renewed its grant to the School of Medicine in St. Louis for a clinical study of nifedipine's ability to protect heart muscle during and after cardiac surgery.

The institute has awarded some $200,000 to continue the nifedipine research another two years, said principal investigator *Richard E. Clark*, M.D., professor of surgery. Washington University received a three-year, $291,000 grant from the institute in 1980 to begin the nation's only study on use of the drug during cardiac surgery.

To date, clinical trials with high-risk patients have indicated that nifedipine decreases severe acute heart failures and heart damage during cardiac surgery, Dr. Clark explained. He said additional funding will be used to continue clinical trials of adults with severe cardiovascular disease and to include in the trials infants with congenital heart defects requiring surgical correction.

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. Brent M. Parker, professor of medicine in the Department of Cardiology, is the principal investigator under a five-year, $300,000 Preventive Cardiology Academic Award from the National Institutes of Health's National Heart, Lung and Blood Institute.

The aim of the program is to improve and augment the teaching of preventive cardiology throughout the School of Medicine's curriculum. Primary emphasis will be on coronary and cerebrovascular disease and the role of risk factor reduction.

Three members of the Department of Psychiatry participated in the scientific program during the annual meeting of the North American Psychiatric Association held recently in Toronto.

David Davis, professor and associate chairman, who is chairman of the North American Society of the Royal College of Psychiatrists, presided at a meeting of that organization. Dr. Davis also served as moderator for a panel discussion on "Concerns of Societal Need, Recruitment and Training." In addition, he was official APA evaluator and discussant for a symposium on "The Differences between American and Canadian Psychiatry."

Dr. Javad H. Kashani, assistant professor of psychiatry (child psychiatry), was invited by the Scientific Committee of the APA to write a chapter on epidemiology of childhood depression for a book "Psychiatry 1982: Annual Review." During the APA meeting, a section of the book was discussed each day by a panel of authors. Dr. Kashani was a discussant in a panel on "Depression in

Childhood and Adolescents."

Dr. Walid O. Shekim, associate professor of psychiatry (child psychiatry), presented a paper on "Urinary MHPG and HVA Excretion in Boys with Attention Deficit Disorder and Hyperactivity Treated with D-Amphetamine." *David B. Bylund*, assistant professor of pharmacology, was among the co-authors of the paper.

Javad H. Kashani, assistant professor of psychiatry (child psychiatry), presented a paper on childhood depression at a recent conference sponsored by Mercy Hospital and Medical Center in Chicago. The topic of his presentation was "Etiology and Treatment of Childhood Depression from a Psychobiological Point of View."

Prof. Richard Finkelstein, chairman of the Department of Microbiology, and *Prof. Herbert S. Goldberg*, professor of microbiology, were members of the symposium executive committee.

Dr. William Thomas Griffin, professor and doctor of gynecology and obstetrics, worked this summer for Project HOPE (Health Opportunity for People Everywhere) in St. Johns, Antigua.

Based at the Holberton Hospital, Dr. Griffin taught classes, consulted with patients, performed surgery and worked with Antiguan midwives.

Deborah Lower, a National Institute of Mental Health post-doctoral fellow, is one of 12 researchers selected to participate in the 1982 Gerontological Society of America Research Fellowship Program. She will conduct an evaluation of a geriatric outreach program at Ventura County Mental Health Services in Ventura, Calif. Each fellow in the 9-year-old program receives a $5,000 stipend.

T. D. Luckey, professor of biochemistry, served as co-director of the seventh International Symposium on Intestinal Microecology held during August in Boston in cooperation with the Tufst University medicine and veterinary medicine schools.

The symposium focused on the intestinal microenvironment.

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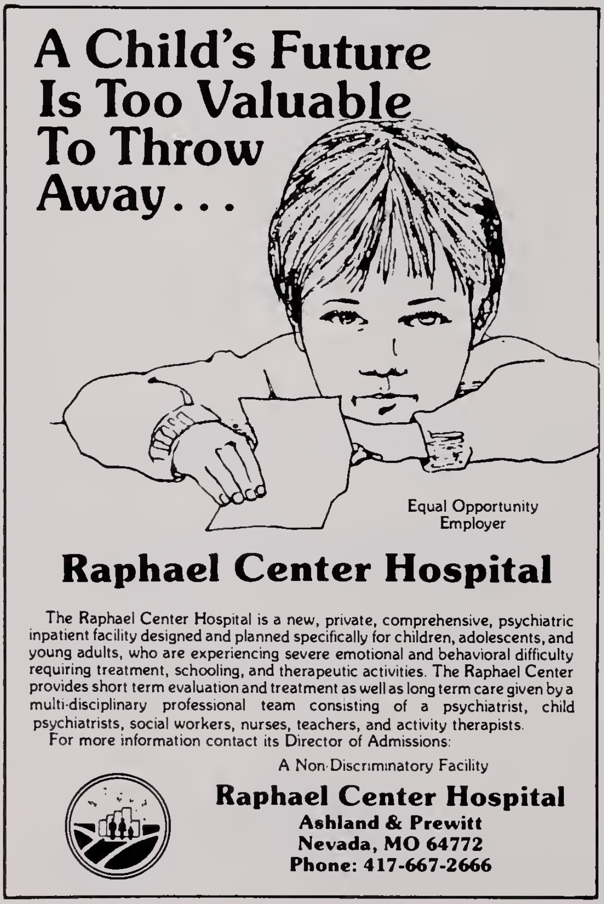
New Members

Wolfgang Hans Baerwald, M.D., 1700 Berthing, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Baerwald is a native of Bonn, Germany, received his preliminary education at Oakland University and his M.D. degree at Wayne State University in 1978. He specializes in radiation oncology.

Melvin K. Burton, M.D., 8331 Switzer, Overland Park, Kan. 66214, has become a member of Jackson County Medical Society. Dr. Burton is a native of St. Louis, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1980. He specializes in internal medicine.

Dwight L. Deardeuff, M.D., 11th & Bishop, Rolla 65401, has become a member of Mid-Missouri County Medical Society. Dr. Deardeuff is a native of Colorado Springs, Colo., received his preliminary education at the University of Missouri-Rolla and his M.D. degree at the University of Missouri-Columbia in 1976. He specializes in internal medicine.



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Carl R. Doerhoff, M.D., 1111 Madison, Jefferson City 65101, has become a member of Cole County Medical Society. Dr. Doerhoff is a native of Tuscumbia, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in general surgery.

Mary Kay Rauth Farley, M.D., 510 Francis, Suite 314, St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Farley is a native of East St. Louis, Ill., received her preliminary education at Creighton University and her M.D. degree at Creighton University in 1979. She specializes in pediatrics.

Ward M. Hardin, M.D., 4712 Pittman Rd., Kansas City 64133, has become a member of Jackson County Medical Society. Dr. Hardin is a native of Wayne Co., Iowa, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1981. He specializes in internal medicine.

Azhar Latif, M.D., 15th & State Ave., Lexington 64067, has become a member of Lafayette-Ray County Medical Society. Dr. Latif is a native of Peshawar, Pakistan, received his preliminary education at Cantt Public College and his M.D. degree at Khyber Medical College in 1973. He specializes in cardiology and internal medicine.

Charles M. Lederer, Jr., M.D., 6724 Troost, Suite 202, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Lederer is a native of St. Louis, received his preliminary education at William Jewell College and his M.D. degree at the University of Missouri-Columbia in 1977. He specializes in ophthalmology.

Randall J. Moeller, M.D., 1322 N. 36th, St. Joseph 64506, has become a member of Buchanan County Medical Society. Dr. Moeller is a native of Cass City, Mich., received his preliminary education at Michigan Technological University and his M.D. degree at the University of Michigan in 1977. He specializes in urological surgery.

Rolland S. Olds, D.O., Lake of the Ozarks General Hospital, Osage Beach 65065, has become a member of Lake of the Ozarks Medical Society. Dr. Olds is a native of Davenport, Iowa, received his preliminary education at the University of Kansas and his D.O. degree at Kansas City College of Osteopathic Medicine in 1979. He specializes in family practice.

Robert L. Sourk, M.D., 900 N. Belt, St. Joseph 64506, has become a member of Buchanan County Medical Society. Dr. Sourk is a native of Seneca, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1977. He specializes in internal medicine.

John R. W. Taylor, M.D., Suite 624, 6700 Troost, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Taylor is a native of Kansas City, received his preliminary education at Rockhurst College and his M.D. degree at the University of Missouri-Kansas City in 1976. He specializes in ophthalmology.

Leslie E. Tucker, M.D., Suite 201, 800 East 5th, Washington 63090, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Tucker is a native of St. Louis, received his preliminary education at the University of Missouri-St. Louis and his M.D. degree at the University of Missouri-Columbia in 1973. He specializes in internal medicine.

Lynn J. Walley, M.D., 711 Grand Ave., Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Walley is a native of Hickory, N.C., received his preliminary education at the University of Missouri-Columbia and his M.D. degree at St. Louis University in 1978. He specializes in obstetrics and gynecology.

New Student Members

St. Louis University

Vivian A. Kominos
David N. Krojanker
Robert D. Seelig

University of Missouri-Kansas City

Madalane G. Boltz
William D. Bone
John R. Bumberry
Eve Marie Eidel
Michael W. Knudsen
Leslie K. Miller
Edward Kevin Scanlon
Donald K. Strickland
Mary Pat Strickland
Jana L. Turner

Washington University

Karen M. Mathews
William L. Woods

In Memoriam

Emerson L. Simpson, M.D., 1630 N. Jefferson, Suite 2, Springfield 65803; graduate of University of Louisville, 1935; member of Greene County Medical Society; aged 78; died June 5, 1982.

Joseph G. Siceluff, M.D., 3280 Eldorado, Springfield 65804; graduate of University of Colorado, 1934; member of Greene County Medical Society; aged 78; died July 24, 1982.

Henry W. Eyermann, M.D., Warrenton 63383; graduate of St. Louis University, 1925; member of Franklin-Gasconade-Warren Counties Medical Society; aged 82; died Sept. 29, 1982.

Edward C. O'Brien, M.D., 605 Candlebury Ct., Apt. B, St. Louis 63122; graduate of St. Louis University, 1924; member of St. Louis Metropolitan Medical Society; aged 86; died Oct. 17, 1982.

Heinz E. Haffner, M.D., 3 Lindworth, St. Louis 63124; graduate of Washington University, 1935; member of St. Louis Metropolitan Medical Society; aged 74; died Oct. 22, 1982.

Frances R. Ritchie, M.D., 720 Olive, 24th Floor, St. Louis 63101; graduate of the Medical College of Pennsylvania, 1908; member of St. Louis Metropolitan Medical Society; aged 101; died Oct. 22, 1982.

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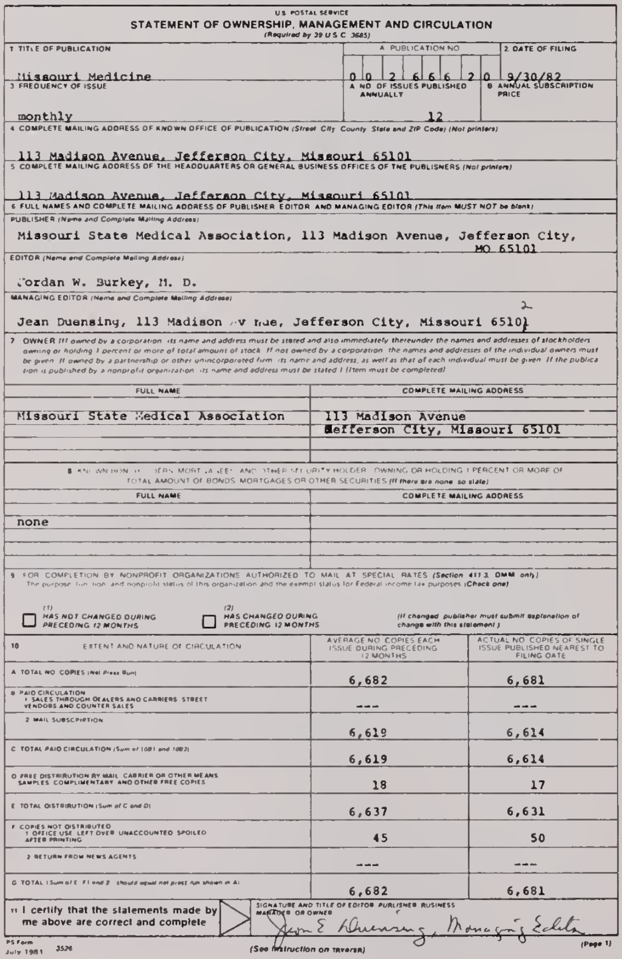

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in Brief

A summary of AMA, medical & health news

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A COMPUTERIZED information network for the medical profession was launched by the AMA and GTE Corporation at a press conference and medical leaders' briefing in Chicago. GTE Telenet Medical Information Network will feature four data bases that are licensed and maintained by the AMA: Drug Information, Disease Information, Socio-Economic Bibliographic Information, and Medical Procedure Coding and Nomenclature. An additional feature is MED/MAIL, an electronic mail system that offers instant transmission of written messages between subscribers. Now undergoing field tests, the system will shortly beginning operations in Chicago, Washington, D.C., Los Angeles, and Houston. A wide variety of computer terminals — either video display tubes or hard-copy printers — will link the MD-subscriber with the network's data banks in Vienna, Va. Connections can be made through existing telephone lines. The initial subscription fee is $100. In addition, information services will cost $25 to $27 per hour, depending on the data base used. MED/MAIL will cost $7 to $16 per hour, depending on the time of day the service is employed. "Eventually, physicians and other users at computer terminals spanning the nation will have instant access to up to the minute clinical information and protocols, along with a broad range of other medical and health-related information," said AMA Executive Vice President James H. Sammons, M.D.

THE AMA IS MOUNTING a major initiative to combat prescription drug abuse. At an AMA-sponsored meeting, 20 organizations representing prescribers, dispensers, regulators, and enforcement officers established a sheering committee to serve as a fulcrum for national action on the problem. A model system will be developed for states to use in analyzing data to pinpoint physicians who overprescribe controlled drugs. The model will be available to state agencies next year through state medical societies. The societies will preview the model in early 1983. The steering committee also is supporting a series of state and regional conferences on the misuse, abuse, and diversion of prescription drugs. Two conferences have been held and ten more are planned in 1983. For more information, contact Mental Health Program, AMA Headquarters.

COMPETITION FOR PATIENTS is increasing and is having a definite impact on medical practice in the United States, according to a survey of 1,000 physicians conducted by the AMA Group on Public and Federation Relations. Nearly three of four physicians said they believe that there is a current or impending surplus of physicians in certain specialty areas in their community, with surgery heading the list. An increasing number said there are too many physicians in their communities (41% this year compared to 33% in 1981). The physicians in the survey reported major increases in competition from hospital outpatient clinics. Perhaps as a result of increasing competition for patients, physicians in many parts of the United States are making house calls. Some 30% said they make house calls, and nearly 60% said other physicians in their areas make house calls. "These trends are undoubtedly amplified by the general economic climate and the large numbers of new physicians continuing to graduate from medical schools," according to the survey, which was published in *Survey and Opinion Briefs*, an AMA newsletter.

MORE THAN HALF of all surgical procedures are currently performed on an ambulatory basis. This includes nearly all surgical procedures performed by physicians in emergency medicine and three quarters of those performed by general and family practitioners, according to a survey conducted by the AMA Socioeconomic Monitoring System. "Ambulatory surgery is likely to become even more common as medical advances expand the type of surgery that can be performed on an outpatient basis," stated the *SMS Report*. Surgeons performed 40% of all ambulatory surgery. Based on interviews with 1,268 physicians, the survey also found a widespread interest by physicians in other specialty areas as well. In the last two years, more than a third of all physicians who perform surgery have increased the amount they perform on an ambulatory basis.

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PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

ADVERSE REACTIONS Hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia may occur. Other adverse reactions to Ru-Tuss Tablets may be drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerotomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, dizziness and insomnia Large overdoses may cause tachypnea, delirium, fever, stupor, coma and respiratory failure

DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening Not recommended for children under 12 years of age Tablets are to be swallowed whole

HOW SUPPLIED:

Bottles of 100 Tablets	NDC 0524-0058-01
Bottles of 500 Tablets	NDC 0524-0058-05

Federal law prohibits dispensing without prescription.

DISTRIBUTED BY:
Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

MANUFACTURED BY:
Vitarine Company, Inc.
Springfield Gardens, New York 11413

RU-TUSS®
Expectorant

DESCRIPTION
Each fluid ounce of Ru-Tuss Expectorant contains·

Codeine Phosphate (WARNING: MAY BE HABIT FORMING)	65.8 mg
Phenylephrine Hydrochloride	30 mg
Phenylpropanolamine Hydrochloride	20 mg
Pheniramine Maleate	20 mg
Pyrilamine Maleate	20 mg
Ammonium Chloride	200 mg
Alcohol	5%

Ru-Tuss Expectorant is an oral antitussive, antihistaminic, nasal decongestant and expectorant preparation.

INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold

CONTRAINDICATIONS Hypersensitivity to antihistamines Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated
Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant.

WARNINGS Ru-Tuss Expectorant contains codeine phosphate, therefore, the patient should be warned of the potential that this drug may be habit forming Ru-Tuss Expectorant may cause drowsiness Patients should be warned of the possible additive effect caused by taking antihistamines with alcohol, hypnotics, sedatives and tranquilizers.

PRECAUTIONS Patients taking Ru-Tuss Expectorant should avoid driving a motor vehicle or operating dangerous machinery (See Warnings). Caution should be taken with patients having hypertension, diabetes, hyperthyroidism and cardiovascular disease
Caution should also be used in patients with pulmonary, hepatic or renal insufficiency

ADVERSE REACTIONS Ru-Tuss Expectorant may cause drowsiness, lassitude, giddiness, dryness of mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, tachycardia, hypotension/hypertension, faintness, dizziness, tinnitus, headache, incoordination, visual disturbances, mydriasis, xerostomia, blurred vision, anorexia, nausea, vomiting, diarrhea, constipation, epigastric distress, hyperirritability, nervousness, and insomnia. Overdoses may cause restlessness, excitation, delirium, tremors, euphoria, metabolic acidosis, stupor, tachycardia and even convulsions

DOSAGE AND ADMINISTRATION Adults· 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period

Children 6 to 12 years of age ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period Children 2 to 6 years of age· ½ teaspoonful every 4 hours, not no exceed 3 teaspoonfuls in any 24-hour period Children under 2 years of age· Use as directed by a physician.

HOW SUPPLIED: (16 fl oz)

Pint Bottles	NDC 0524-1010-16

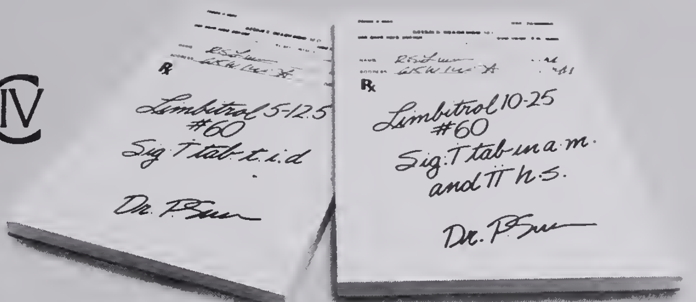
Federal law prohibits dispensing without prescription.

MANUFACTURED AND DISTRIBUTED BY:
Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106

Boots Pharmaceuticals, Inc.
Shreveport, Louisiana 71106
Pioneers in medicine for the family

Limbitrol® ⒸIV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline
(as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline
(as the hydrochloride salt)



In anxious depression,

SPECIFIC FOR THE NONPSYCHOTIC PATIENT

Fits the picture of anxiety/depression correlation

Most patients with a mood disorder have a mixture of anxiety and depression. One clinician[1] found a correlation of 0.7 in anxiety and depression scores; another[2] has estimated that 7 of 10 nonpsychotic depressed patients are also anxious. For the dual symptomatology of anxious depression, Limbitrol provides dual medication.

More appropriate for the nonpsychotic depressed and anxious patient

Limbitrol contains both amitriptyline, specific for symptoms of depression, and a benzodiazepine, specific for the symptoms of anxiety. Thus it is a better choice than other dual agents for anxious depression that contain a phenothiazine, a class of antipsychotic drugs less specific for anxiety and now generally avoided in nonpsychotic patients.[2,3]

Avoids the risk of tardive dyskinesia carried by the phenothiazine combinations

The causal relationship between the phenothiazines and other extrapyramidal side effects, including tardive dyskinesia, is well established. In contrast, the reported incidence of these adverse reactions with Limbitrol or either of its components is rare.

References: 1. Clagham J: *Psychosomatics 11*:438-441, Sept-Oct 1970. **2.** Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine,* edited by Jarvik ME. New York, Appleton-Century-Crafts, 1977, p. 316 **3.** Baldessarini RJ, Tarsy D: Tardive dyskinesia, in *Psychopharmacology: A Generation of Progress,* edited by Lipton MA, DiMascio A, Killam KF. New York, Raven Press, 1978, p. 999.

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 50.

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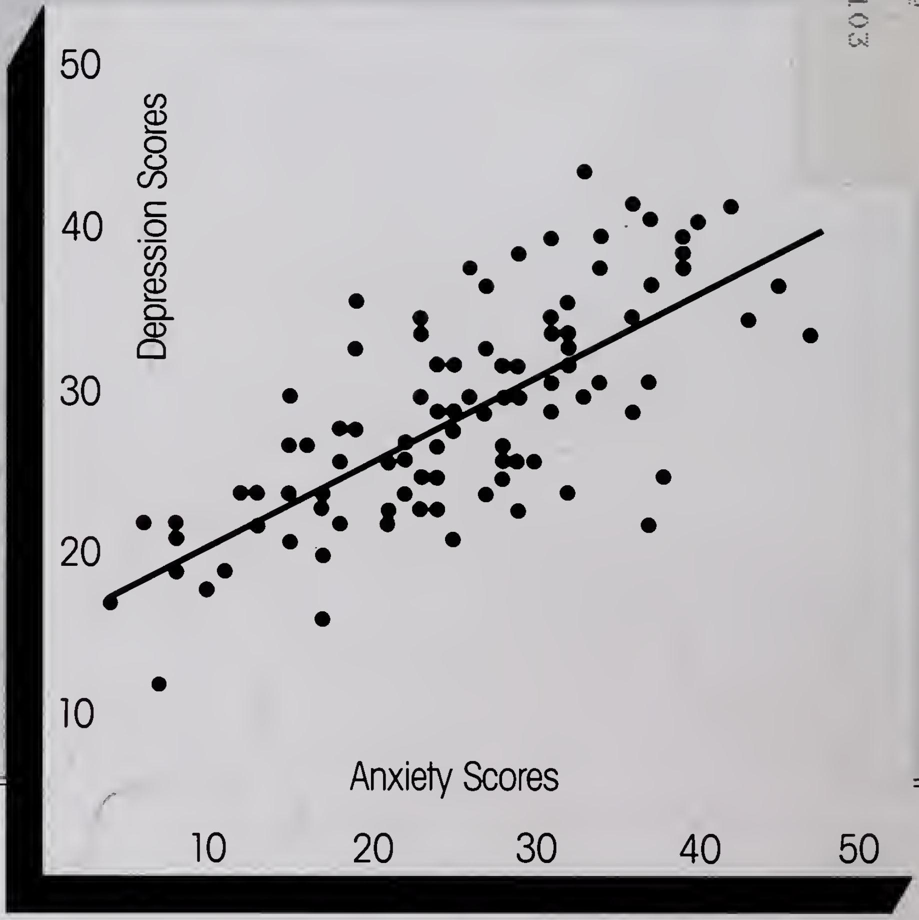
MORE DEPRESSION
MEANS MORE ANXIETY...



The graph illustrates the close correlation between depression and anxiety derived through the MMPI and the Taylor Manifest Anxiety Scale in 100 nonpsychotic psychiatric patients. The Coefficient of Correlation is 0.7. As depression increased, so did the anxiety levels.

—Adapted from Claghorn J[1]

A key reason why

MORE PHYSICIANS ARE CHOOSING
LIMBITROL®

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

ROCHE®

1. Claghorn J: *Psychosomatics* 11:438-441, Sept-Oct 1970

Please see summary of product information on inside cover.

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STACKS

79-12

Missouri Medicine

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Ellis Fischel
State
Cancer Center
Special Issue

MSMA
125th ANNUAL
CONVENTION

March 17-20, 1983
Tan-Tar-A Resort
Lake of the Ozarks

Value of Laparotomy in The Staging of Hodgkin's Disease

Malignant Superior Vena Cava Syndrome

Dr. Ellis Fischel

Colorectal Cancer Detection in an Asymptomatic Population

Orodental Management of the Chemotherapy Patient

Dr. Fischel Would Be Proud

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We work for MOMEDICO. And for YOU.

Howard McAlhany, M.D., Chairman

The reason is simple.
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NEWS NEWS NEWS NEWS Round Up

December, 1982

MSMA urges HHS to drop Medicare rule

MSMA has urged the federal Health and Human Services Dept. to withdraw a proposed Medicare rule, "Payment for Physician Services in Institutional Providers of Services."

MSMA President John I. Matthews, M.D., asked Carolyne K. Davis, Ph.D., administrator of the Health Care Financing Administration, to immediately drop the rule, since it does not conform to S1887 of the Social Security Act.

The Health Care Financing Administration published the proposed rule on Oct. 1, 1982, in the *Federal Register*. The Medicare rule is aimed at implementing a section of the newly enacted Tax Equity and Fiscal Responsibility Act of 1982. If action is taken, it will go into effect Jan. 1, 1983.

The proposed rule directs the Secretary of HHS, by regulation, to determine criteria for distinguishing those physician services rendered in a hospital or skilled nursing facility which are to be reimbursable under Part B of the Medicare Program and those services which are to be reimbursable under Part A of the Medicare Program.

According to Dr. Matthews, the proposed rule inappropriately extends the application of the RCEs to Part B reimbursement. "It seems to be based on inappropriate data," says Dr. Matthews. "It fails to represent physician income characteristics, and the provisions for projecting future income is not based on proper methodology."

"It appears to us that the proposed rule would create situations where a physician could directly furnish care to a Medicare beneficiary and be denied reimbursement from Medicare Part B," says Dr. Matthews. "It also fails to recognize proper variances in physicians' income, i.e. department in a 50-bed hospital and department in an 800-bed hospital."

Specifically, the purpose of the proposed rule is to set absolute limits on the reasonable and allowable compensation recognized by Medicare for hospital-based physicians compensated through the hospital. Percentage of revenue contracts are the primary target of these regulations; radiologists, pathologists and anesthesiologists will be affected.

"The rule would set limitations on anesthesiology and establishes standards for medical care that are not authorized by law and appear to be in violation of present law," says Dr. Matthews. "The arbitrary cap on reimbursement for radiology services is both inappropriate and not authorized by law. Medicare reimbursement would be inappropriately denied under Part B for clinical pathology services. It denies Part B reimbursement where the pathologist reports on a test within the normal range or initiates the consultation."

Recommendations sought for 1983 committee appointments

Dr. Ronald A. Youmans, Missouri State Medical Association president-elect, is soliciting recommendations for commission and committee appointments available in 1983.

At the 125th Annual Convention, Dr. Youmans will take the gavel as the new MSMA president. During the convention, he will appoint new commission and committee members.

The Annual Convention will be held March 17-20 at Marriott's Tan-Tar-A at Lake of the Ozarks.

Nominations may be sent to MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

Dr. Bohigian seeks election

George M. Bohigian, M.D., is seeking election to the American Medical Association's Council on Scientific Affairs. Dr. Bohigian is a private practitioner, associate professor of clinical ophthalmology at Washington University School of Medicine and assistant ophthalmologist at Barnes Hospital, both in St. Louis.

For many years, Dr. Bohigian has been involved in organized medicine. Since 1980, he has been a member of the AMA House of Delegates.

In 1980, Dr. Bohigian was vice president of MSMA. He has been an active member of the MSMA House of Delegates since 1974.

Locally, he is past president of the St. Louis Metropolitan Medical Society and has been chairman of many of its committees.

The election will take place at the AMA's Interim Meeting, Dec. 5-8 in Miami, Florida.

George Bohigian, M.D.

Medicaid providers now can defer compensation

Soon physicians who are involved in the state's Medicaid program will be eligible to participate in the Missouri State Public Employees Deferred Compensation Plan. While the program takes effect Jan. 1, 1983, physicians can enroll in the program now.

The Deferred Compensation plan allows physicians to defer Medicaid payments and the taxes on that income until retirement, disability or death. This way, physicians can lower their current taxes and can use tax money to build a retirement account. There are several financial security options available including fixed annuity, variable annuity or life insurance.

Managing the program is the Public Employees Benefit Services Corporation of Missouri (PEBSCO). PEBSCO is the nation's largest company specializing in deferred compensation for public employees.

For more information on the Deferred Compensation Plan, contact PEBSCO, 308 East High Street, Jefferson City, MO 65101 (314) 634-4500.

AMA program gives patients drug instruction

Each year, Americans have 750 million prescriptions filled. But about 40% of these prescriptions may not help their users because the medications are not taken correctly, says the AMA.

That's why the AMA has initiated a Patient Medication Instruction (PMI) program.

The PMIs are 5 1/2-inch sheets printed on both sides with instructions in clear, simple language detailing the purpose of the drug, how it is to be taken and its possible side effects. Space is provided to write the dosage and any special instructions the physician may have for the individual patient.

PMI sheets for individual drugs or drug classes are bound in pads of 100 sheets. They are available now for 20 of the most widely prescribed drugs or drug classes at a nominal charge to defray the cost of postage and handling. Eventually the program will provide PMIs for as many as 100 drugs or drug classes that will represent the vast majority of all prescriptions written.

These are the drugs or classes of drugs covered by the information sheets: furosemide, a diuretic; thiazide diuretics; oral penicillins; digitalis preparations; coumadin-type anticoagulants; oral antidiabetics; tetracyclines; cephalosporings; erythromycin; non-sterodial anti-inflammatory agents; benzodiazepines; sublingual nitroglycerin; methyldopa; insulin; oral costicosteroids; cimetidine; belladonna and barbiturates; phenytoin; sulfonamides, and beta-blockers.

The minimum order is 10 pads for $5. MSMA advises members to order one pad of each of the 20 drug classifications for $10. Orders must be **prepaid.** Order by writing AMA, P.O. Box 52, Rolling Meadows, Ill. 60008.

Members can save 14% on IBM typewriters

IBM Corp. is now offering MSMA members a special discount on IBM electronic typewriters. If MSMA receives 50 or more typewriter orders, members will receive a 14% discount on each typewriter ordered.

Members need to place their orders by Dec. 31, so that they can take advantage of 1982 investment tax credits and 1982 depreciation tax deductions.

Members can choose from the following typewriters models: IBM Correcting Selectric III — Model 6705 with a 15.5 inch carriage, $926.82 retail — $1,035; IBM Model 75 Electronic Typewriter with a 10-page storage capacity, $1,746.18 (retail — $1,950); and IBM Selectric III Model 6701, single pitch 13.5 inch carriage without correcting feature, $725.34 (retail — $810). Prices include sales tax.

To receive a discount, MSMA members must send their checks to MSMA by Dec. 31. Typewriters will be shipped from IBM directly to members.

Members who are interested in one or more typewriters for their home or office, should mail the attached coupon to MSMA, P.O. Box 1028, Jefferson City, MO 65102.

Yes, I would like to receive a 14% discount on an IBM electronic typewriter. Please order ______________ for me.

Name ______________

Street ______________

City/State/Zip ______________

Telephone ______________

Emergency medical history easily attainable on microfilm

Within seconds a physician can now unearth a comprehensive medical history on an accident victim. On a wallet-size Medical Information Card produced by the National Safety Council, a wide range of medical data is placed on a strip of microfilm. The National Safety Council is promoting use of these cards throughout the country.

The Medical Information Cards can contain such information as an electrocardiogram tracing a special heart condition, complicated medical conditions, medicines the victim takes and blood type.

Along with medical data, the microfilm can carry information on insurance, authorization for surgery, organ donation and addresses and phone numbers of next of kin and personal physician.

So that any physician can easily read the microfilm strip, the card has a built-in lens system. In an emergency, a physician need only bend the plastic card into a U-shape until the lens is about one inch from the film.

Carriers of the medical information card are provided with a set of self-adhesive stickers that can be placed on a wallet or a driver's license. In an emergency, the stickers will alert physicians that the accident victim is carrying a card with vital medical information. A similar sticker may be applied to the windshield of the card bearer's car.

For more information on the National Safety Council Medical Information Card write National Health and Safety Awareness Center, Department B, 333 N. Michigan Ave., Chicago, IL 60601.

Annualized changes in Sept. '82 CPI listed

All Items	2.1
All Services	2.9
Medical Care	10.2
Physicians' Services	7.1
Prescription Drugs	10.3
Hospital Room	10.2
Transportation	-3.6
Housing	-1.5

Mo.'s AMA membership increases to record 5,376

Next year, MSMA will have an additional delegate in the AMA House of Delegates. According to preliminary AMA figures, six MSMA members will join the body of AMA policy-makers in 1983.

Representation to the AMA House is based on the number of members each state association has participating in the AMA. One delegate is awarded for every 1,000 members.

As of Oct. 18, MSMA had listed a record-breaking 5,376 AMA members. In 1981, MSMA had 4,726 AMA members.

Nominees sought for civic award

The Missouri State Medical Association is seeking nominations for its second annual Citizenship and Community Service Award. The award is designed to honor a civic-minded physician, who has significantly contributed to his community's betterment.

Nominations for the award should include a curriculum vitae and a one or two page statement about the nominee's qualifications for the award.

All nominations must be received by January 10, 1983. Submit nominations to MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102.

The award will be presented at the 1983 Annual Convention, March 17-20, at Marriott's Tan-Tar-A at Lake of the Ozarks.

Practice management seminar scheduled for April 28-29, 1983

Next spring the Missouri State Medical Association will sponsor a two-day "Establishing Yourself in Medical Practice" workshop.

The seminar will be held April 28-29 at the King's Inn, St. Louis Airport, 9600 Natural Bridge Rd.

The program is geared to help physicians start and build a rewarding practice, while minimizing frustrations and costly errors. Participants who will find the greatest benefits are residents and physicians leaving military and public health positions.

Presenting the program is Conomikes Associates, Inc., a nationally recognized medical management consulting firm.

The workshop covers such areas as personnel, financing your practice, medical records, economic and legal aspects and practice-building.

For more information, contact MSMA, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

Court finds R.N.s guilty of unauthorized medical practice

The St. Louis County Circuit Court recently ruled that certain specific activities engaged in by registered nurses in planned parenthood clinics without required physician supervision constitute unauthorized practice of medicine.

In the case of Sermchief, et al v. Gonzales, et al, the court found that the acts of plaintiff registered nurses in performing pelvic examinations to diagnose the existence or nonexistence of contraindications for the use of contraceptives, IUDs and vaginal medications does not constitute the practice of professional nursing within the scope of the Missouri Nursing Practice Act. The court ruled that the existence of standing orders and protocols describing potential contraindications established by physicians did not change the situation; the acts amounted to the unauthorized practice of medicine.

Further, the court said that providing oral contraceptives, IUDs and vaginal medications to patients as described in standing orders and protocols on these subjects without the same having been prescribed by physicians was not the practice of professional nursing. Again, these acts amounted to the unauthorized practice of medicine.

It is expected that the case will be appealed to the Missouri Court of Appeals by the losing plaintiffs.

Plasma publications available

The American Association of Blood Banks (AABB) has just completed publication of its 1982 line of educational manuals.

A complete catalogue providing general information and descriptions of AABB publications is available by writing the American Association of Blood Banks, 1117 N. 19th Street, Suite 600, Arlington, VA 22209.

Missouri's Medicaid fees increase for physician providers

Missouri physicians who treat Medicaid patients will receive an extra $1,442,871 this year by way of fee increases. The increases, which resulted from money appropriated by the General Assembly earlier this year, went into effect Dec. 1, 1982.

The Missouri Division of Family Services cites several reasons for upping the amount of reimbursement given physicians. First, it hopes to encourage Medicaid recipients to seek care in physicians' offices rather than using high-priced emergency rooms. Too, the Division hopes to encourage more physicians in this state to accept Medicaid patients.

A recent survey, conducted by MSMA, reveals that during the 1982 fiscal year physician providers were paid 36% of billed charges. According to the survey, physicians submitted charges of $74,228,340 and in turn were paid $27,035,672.

The questionnaire survey was conducted during the first six months of 1982.

New Medicaid Fee Schedule

Codes	Description	Old Fee	New Fee
NEW PATIENT			
90000	Brief Service	$12	$15
90010	Limited Service	$12	$15
90015	Intermediate Service	$18	$20
90017	Extended Service	$24	$27
90020	Comprehensive Service	$24	$27
ESTABLISHED PATIENT			
90030	Minimal Service	$4	$5
90040	Brief Service	$9	$10
90050	Limited Service	$10	$14
90060	Intermediate Service	$13	$17
90070	Extended Service	$15	$20
90080	Comprehensive Service	$20	$25

Board of Healing Arts asks for amphetamine regulations

A proposed rule restricting use of amphetamines and amphetamine-like drugs was published in the Nov. 4 *Missouri Register* by the State Board of Registration for the Healing Arts.

The proposed rule states that amphetamines and amphetamine-like drugs shall not be prescribed to treat exogenous obesity, except when other therapy has failed and except under the following requirements:

1) A complete history and physical examination of the patient shall be taken, including the taking of blood pressure, pulse, checking of the heart and lungs, weight, height and appropriate diagnostic tests. The history and examination shall determine if the patient has previously been drug dependent, if the cause of obesity is one which indicates the drugs to be inappropriate, and to determine if there exists other contraindications to use of the drugs.

2) A diet for weight loss shall be prescribed and shall be recorded on the patient's record.

3) Daily dosage shall not exceed that recommended in the manufacturer's prescribing information for the drug prescribed or dispensed.

4) Not more than a 30-day supply shall be dispensed or prescribed for a patient on the first visit. Thereafter, not more than a 30-day supply shall be dispensed or prescribed at the time of each visit. The patient shall be weighed at each visit prior to dispensing or prescribing an additional supply of the drug and the weight shall be entered in the patient's record. If the patient is found not to have achieved a significant weight loss since the last visit, no more drugs shall be dispensed.

5) With each follow-up visit, the progress of the patient shall be monitored, which shall include the checking of weight, blood pressure, pulse, heart and lungs. The findings shall be entered in the patient's record.

6) In no event shall amphetamine or amphetamine-like anorectic agents be dispensed or prescribed for a period longer than 90 days.

In addition, the proposed rule states that the patient's record and the prescription for such drug shall indicate the specific purposes for which the drug is being provided, i.e. obesity, narcolepsy and hyperactivity.

A physician may apply for a waiver of the requirements by submitting a written request to the State Board of Registration for the Healing Arts.

For more information contact Gary R. Clark, executive secretary, State Board of Registration for the Healing Arts, P.O. Box 4, Jefferson City, MO 65102 (314) 751-2334.

Two exotic spring cruises offered to MSMA members

Exotic travel will highlight the spring season for MSMA members. Two spring tours are being conducted by INTRAV and both feature medical education seminars.

The Caribbean Cruise, leaves St. Louis and Kansas City on March 16 and returns March 26, 1983. On this trip members can travel to Ft. Lauderdale, St. Thomas, Antigua, Martinique, Barbados and St. John.

A second trip, the Danube River Adventure, May 30 — June 12, offers travel to some of the most romantic spots in Europe. On this trip, MSMA members will get to travel to West Germany, Austria, Czechoslovakia and Hungary.

In conjunction with these trips, Continuing Medical Education Seminars will be conducted for credit in Category II.

For more information on either trip, contact the Missouri State Medical Association, P.O. Box 1028, Jefferson City, MO 65102 (314) 636-5151.

Fraud hotline established

Fraud and abuse in government health programs may be reported via a toll-free hotline to the inspector general's office at the Health and Human Service Dept. Callers may remain anonymous. The number is 800-368-5779. A telephone recorder will operate during off-duty hours.

Gov. Bond appoints professor to Board of Registration

Gov. Christopher S. Bond has appointed a University of Missouri-Columbia faculty member to the State Board of Registration for the Healing Arts.

Lanis Hicks, assistant professor in the Health Services Management Program at the School of Health Related Professions, will represent Missouri consumers on the board, which is responsible for regulating essential health services, including licensing, in the state. As a public member of the board, Ms. Hicks will be responsible for communicating the views of consumers and soliciting opinions from consumers.

Lanis Hicks and Sen. Roger Wilson, D-Columbia, at Ms. Hicks's confirmation hearing before the Missouri Senate in Jefferson City.

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Ru-Tuss Tablets are an oral antihistaminic, nasal decongestant and anti-secretory preparation.

INDICATIONS AND USAGE Ru-Tuss Tablets provide relief of the symptoms resulting from irritation of sinus, nasal and upper respiratory tract tissues Phenylephrine and phenylpropanolamine combine to exert a vasoconstrictive and decongestive action while chlorpheniramine maleate decreases the symptoms of watering eyes, post nasal drip and sneezing which may be associated with an allergic-like response The belladonna alkaloids, hyoscyamine, atropine and scopolamine further augment the anti-secretory activity of Ru-Tuss Tablets

CONTRAINDICATIONS Hypersensitivity to antihistamines or sympathomimetics Ru-Tuss Tablets are contraindicated in children under 12 years of age and in patients with glaucoma, bronchial asthma and women who are pregnant Concomitant use of MAO inhibitors is contraindicated

WARNINGS Ru-Tuss Tablets may cause drowsiness Patients should be warned of the possible additive effects caused by taking antihistamines with alcohol, hypnotics, sedatives or tranquilizers

PRECAUTIONS Ru-Tuss Tablets contain belladonna alkaloids, and must be administered with care to those patients with glaucoma, or urinary bladder neck obstruction. Caution should be exercised when Ru-Tuss Tablets are given to patients with hypertension, cardiac or peripheral vascular disease or hyperthyroidism. Patients should avoid driving a motor vehicle or operating dangerous machinery (See Warnings).

OVERDOSAGE Since the action of sustained release products may continue for as long as 12 hours, treatment of overdoses directed at reversing the effects of the drug and supporting the patient should be maintained for at least that length of time Saline cathartics are useful for hastening evacuation of unreleased medication. In children and infants, antihistamine overdosage may produce convulsions and death.

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DOSAGE AND ADMINISTRATION Adults and children over 12 years of age, one tablet morning and evening Not recommended for children under 12 years of age. Tablets are to be swallowed whole.

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Bottles of 100 Tablets	NDC 0524-0058-01
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Pyrilamine Maleate	20 mg
Ammonium Chloride	200 mg
Alcohol	5%

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INDICATIONS AND USAGE Ru-Tuss Expectorant is indicated for symptomatic relief of upper respiratory congestion associated with pharyngitis, tracheitis, bronchitis, and allergic rhinitis Also, for the temporary relief of symptoms associated with hay fever, allergies, nasal congestion and cough due to the common cold

CONTRAINDICATIONS Hypersensitivity to antihistamines. Concomitant use of an antihypertensive or antidepressant drug containing a monoamine oxidase inhibitor is contraindicated

Ru-Tuss Expectorant is contraindicated in patients with glaucoma, bronchial asthma and in women who are pregnant

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Caution should also be used in patients with pulmonary, hepatic or renal insufficiency

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DOSAGE AND ADMINISTRATION Adults: 1 or 2 teaspoonfuls, orally, every 4 hours, not to exceed 10 teaspoonfuls in any 24-hour period

Children 6 to 12 years of age: ½ the adult dose, not to exceed 6 teaspoonfuls in any 24-hour period Children 2 to 6 years of age ½ teaspoonful every 4 hours, not no exceed 3 teaspoonfuls in any 24-hour period Children under 2 years of age: Use as directed by a physician.

HOW SUPPLIED: (16 fl oz.)

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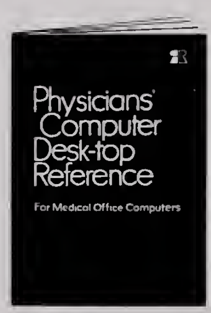
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Editor's Corner

Among the many impossible tasks one might dream up would be that of picking a "typical" doctor. The gray-haired, pipe smoking, omnipotent physician of past decades is found mainly in some old late night movies and in occasional fond memories. The new species of physician is more difficult to define. The average male physician's age is now 44 years, but that statistic may only confuse the picture — more and more M.D.s are women and they are younger. The cities are garnering more of the graduates all the time. Statistics from 1980 show that only a third of Missouri counties have as many as ten practicing physicians. Do you want a family doctor? Only 30 counties in the state can show as many as half-dozen specimens of this endangered species.

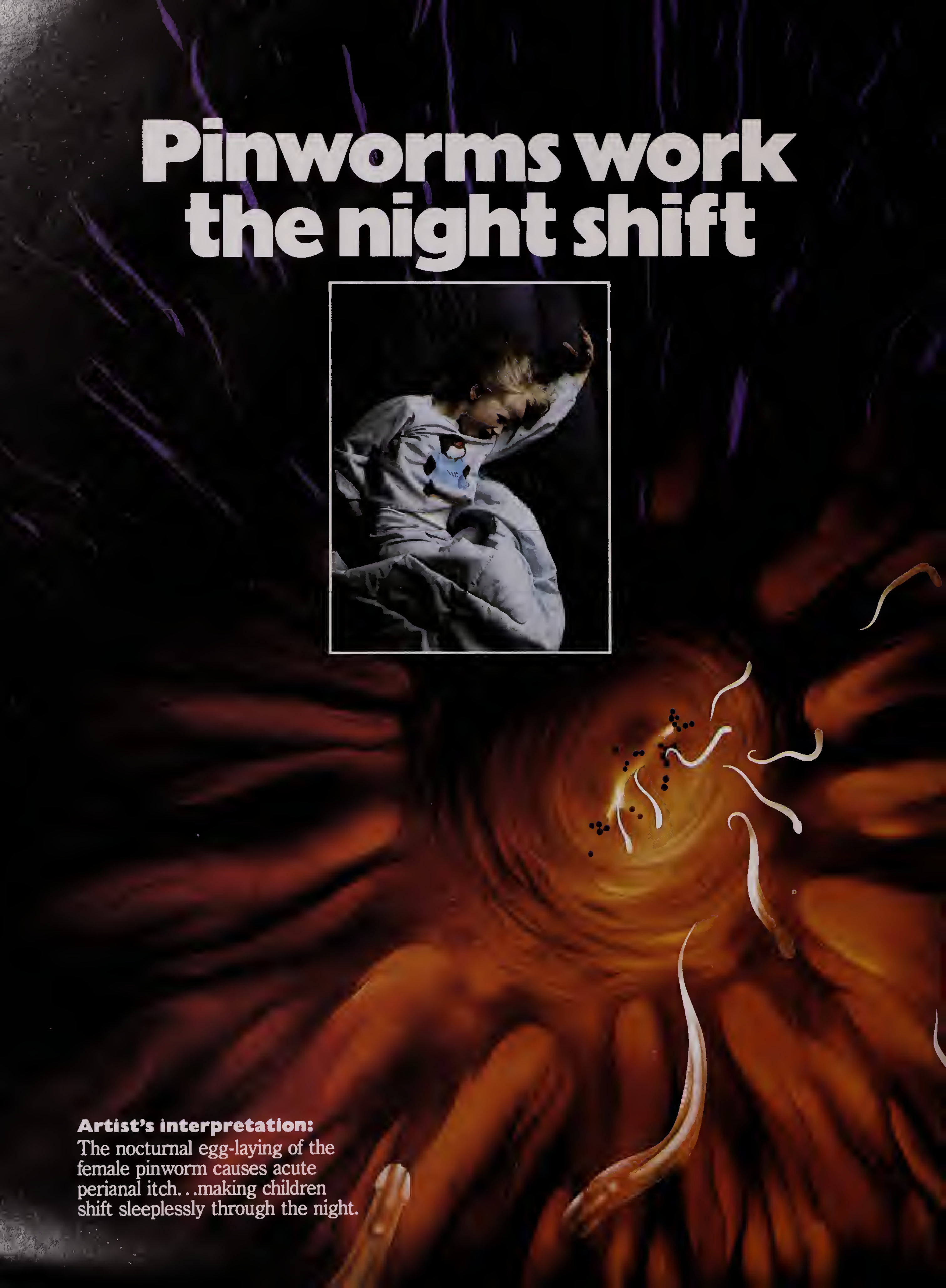
Medical practice has been moving to larger towns and cities and to the better equipped hospitals, but the greatest recent change has been in specialization. Figures gleaned from the 1981 "Physician Characteristics and Distribution in the U.S." shows that only 10% of Missouri's 8,000+ medical doctors consider themselves general or family practitioners, while the other 90% are pigeon-holed into some 33 various specialties. These can be statistically divided into approximate thirds among medical, surgical and "other" specialties. The numbers range all the way from four aerospace medicine experts to 1,497 internists. With the presence of four medical schools undoubtedly being a prime factor, it is noted that about 700 physicians in the state are involved primarily with medical teaching, administration or research.

All county and state medical societies have been having increasing membership and interest problems with the specialization of their members. More doctors are confining their medical activities to their specialty societies rather than being oriented toward their local, state and national organizations. This undoubtedly serves educational needs well, but it may have a negative effect in keeping "organized medicine" together as social and political problems face it in time to come.

The specialists have long been active in the state's larger cities. The St. Louis medical schools have turned out many medical leaders; some national medical journals are published from there. The eye, ear, nose and throat specialists in Kansas City in the early years of the century were so well organized that the American Academy of Ophthalmology and Otolaryngology largely grew from these beginnings. Both major cities have a number of specialty societies, but only fairly recently have "state" associations been organized. At this time, about 20 such groups exist, elect officers, hold meetings and are in line with the specialized educational needs of Missouri physicians.

It does seem proper that MISSOURI MEDICINE gives recognition to these groups, so plans are now underway to at least list the "who, when and where" of these organizations a couple of times a year. Many of them meet with the MSMA at the spring Annual Convention, and will be hosting programs next March at Tan-Tar-A Resort at the Lake of the Ozarks, Osage Beach. No, the aerospace medicine specialists don't have a state society yet, but the pathologists and the dermatologists and the allergists and a number of other groups do have such organizations, and we hope to tell more about them in the future.

JORDAN W. BURKEY, M.D.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References 1. Pitts NE, Migliardi JR: *Clinical Pediatrics* 13:87, 1974. **2.** Modell W: *Drugs of Choice* 1980-1981. C. V. Mosby Co., St. Louis, 1980, p. 362. **3.** Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*, 6th edition, MacMillan Publishing Co., Inc., New York, 1980, p. 1032.

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What information is needed?	Patient's name, address and telephone number in all cases.
How are second and third party payments handled?	EFSCC bills Medicaid, Medicare and insurance companies directly.
What is a cancer center?	A specialty hospital dedicated to cancer treatment, care, research and education.

NOTE: EFSCC is in the process of developing a new referral plan with an 800 phone number. Details will be announced in MISSOURI MEDICINE in an early issue in 1983.

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Special Article

Dr. Fischel Would Be Proud

By
EUGENE M. BRICKER, M.D.
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"Ellis Fischel State Cancer Center: A New Name, A New Beginning," an article that appeared in the September, 1982 issue of Missouri Medicine,[1] informed the membership of the Missouri State Medical Association on the up-to-date status of the Ellis Fischel State Cancer Center and the Cancer Research Center, now affiliated institutions. Under the new legislation, Ellis Fischel has been designated the State Cancer Center.

The cancer center title involves much more than a simple change in name. Because the State Cancer Commission was aware of the immediate necessity of taking steps to fulfill the legislative directives and justify the new name, an official affiliation agreement with the adjacent private, nonprofit Cancer Research Center became a priority. The affiliation process was expedited and accomplished by the Cancer Research Center Board of Trustees and the State Cancer Commission.

The wisdom of this move on the part of both governing bodies cannot be overemphasized. A cancer center must offer basic and clinical research and prevention-detection programs in addition to highly specialized treatment regimens, oncologic nursing practices and other components of total patient care. The affiliation was essential and logical because of the Cancer Research Center's location, its internationally recognized programs in cancer research and detection and its distinction as the only institution in the state devoted solely to cancer research and detection.

The name of Dr. Ellis Fischel, the St. Louis surgeon who was instrumental in establishing the hospital in 1940, is still appropriately incorporated in the title. His name affixed to the hospital has gained worldwide recognition through the outstanding contributions to the medical literature by the staff in the past 40 years. The passage of Missouri Senate Bill 717 places the institution in a position to regain and maintain the eminent status it has earned in the past. Dr. Fischel would be proud.

The Missouri State Medical Association played an important role in the passage of the legislation through its own endorsement and the obvious support of many individual members. Without this support, the legislation almost certainly would not have passed. The way is now open for Missouri to develop the type of cancer center that will be a credit to the state through its service to patients and the practicing medical community.

Significant changes affected by this legislation include the amalgamation of Ellis Fischel and the Cancer Research Center into a single "center" entity with each institution supporting the other through its specialized functions; the appointment of a governing body, the State Cancer Commission, with complete responsibility for the hospital and, thus, removal from the Missouri Division of Health; the provision for a center director with broad administrative and planning authority;

In this article, the author describes the reorganization of the Ellis Fischel State Cancer Center and the services it offers.

Dr. Bricker has commented that "My friends throughout the state will recognize the position of interest from which this article is written. Even so, I believe my confidence in Ellis Fischel State Cancer Center is justified in terms of my experience there and objective judgment as a physician. It is my hope the medical profession in Missouri will rally to see this valuable state resource prosper."

Dr. Bricker is a member of the Associate Staff, Ellis Fischel State Cancer Center and Cancer Research Center, and Emeritus Professor of Clinical Surgery, Washington University School of Medicine in St. Louis.

This investigation was supported by Grant No. RR 05824 from the National Institutes of Health, DHHS.

and the removal of the hospital from the restriction of the State Merit System to allow the establishment of competitive salary levels.

These changes and others make it possible for the combined institutions to be developed into the kind of resource that Dr. Fischel and the original Cancer Commission had in mind. However, the enthusiasm of the Ellis Fischel staff cannot, by itself, create a cancer center. It will be impossible without the continued interest and support of the medical, dental and all other health care professionals of the state.

CENTER DIRECTOR, DIRECTOR OF THE DEPARTMENT OF MEDICINE NAMED

The Ellis Fischel State Cancer Center has been recruiting staff under the leadership of Dr. Ned D. Rodes, acting director.

Ronald G. Vincent, M.D., F.A.C.S., formerly chief of the Department of Thoracic Surgery, Roswell Park Memorial Institute, Buffalo, N.Y., has been named director of the Ellis Fischel State Cancer Center by the Missouri State Cancer Commission. Dr. Vincent assumed his duties on Dec. 1, 1982.

Born in Provo, Utah, Dr. Vincent attended Brigham Young University and received his medical degree from the University of Louisville, Louisville, Ky. He took his surgical residency at Southern Pacific Hospital in San Francisco and at Roswell Park. He was appointed chief of Thoracic Surgery in 1971.

A diplomate of the American Board of Surgery, Dr. Vincent is an internationally-known authority on lung cancer and smoking. He is a member of the Eastern Cooperative Oncology Group, the American College of Chest Physicians, the Society of Surgical Oncology and the American Society of Clinical Oncology.

As director, Dr. Vincent's first goals are to develop the State Cancer Center as a clinical facility operating near capacity, to enlarge the research component in collaboration with the Cancer Research Center and to increase the educational capacity through affiliations with the University of Missouri-Columbia and other research and teaching institutions.

Dr. Ralph Reynolds, newly appointed director of the Department of Medicine at the Ellis Fischel State Cancer Center, began his official duties on Nov. 29, 1982.

Board-certified in internal medicine, Dr. Reynolds recently retired from 22 years in the Air Force, during 18 of which he was stationed at David Grant Medical Center, Travis Air Force Base, Calif., where he has been chief of the Hematology-Oncology Service since 1969.

A nationally-known oncologist, Dr. Reynolds's studies on lung cancer, breast cancer and Hodgkin's disease have been published extensively. He has been active in a variety of chemotherapy studies in cooperation with the Western Cancer Study Group and the Northern California Oncology Group. In addition, he has collaborated with Dr. Ben Papermaster, scientific director of the Cancer Research Center, and the CRC scientists in designing lymphokine studies for lung and colon cancers.

A scientific article by Dr. Reynolds *et al* appears in this issue of MISSOURI MEDICINE.

Missouri needs a first-class oncologic center to complement the community hospitals of the state, especially throughout its central portion. Under the capable leadership of Dr. Rodes, the resurrection of a unique Missouri resource is occurring at a time when the facilities and expertise of this resource are going to be increasingly needed by citizens of the state. Cancer is not only a complicated disease, but an expensive one. For many people, its treatment can be prohibitive in spite of Medicare and Medicaid. In addition to the therapeutic function of the Center, it will play an important role in both clinical and basic research, neither of which can progress without the other.

A priority that parallels recruitment of the professional staff is filling the hospital beds. This can be achieved only with the cooperation of members of the medical profession of the state.

For reemphasis, the following is a quotation from the article[1] that appeared in the September issue:

"The purpose of the Ellis Fischel State Cancer Center is, then, to develop a tertiary care facility where necessary services can be concentrated to take care of those patients whose disease represents problems beyond routine management and who most physicians in community hospitals might prefer to have treated in a categorical cancer center. Sixty percent of treated cancers recur, and Ellis Fischel will be a referral center for these problem cases and for those that are special problems at the outset.

"In other words, Ellis Fischel State Cancer Center realizes that its job is to complement, not to compete with, the many capable physicians and community hospitals that are not structured to concentrate, as Ellis Fischel is, on the usually expensive and sophisticated equipment and facilities that specialized cancer treatment and care often demand. Unfortunately, many patients with progressive disease eventually exhaust both their own resources and those of the community. The State of Missouri recognizes this fact and, by statute, Ellis Fischel will continue to treat the indigent cancer patient. The Center, also, will treat nonindigent patients and, now, patients from out-of-state with physician referrals."

In addition to the obvious examples of the indigent and those patients whose cancers have not responded to primary treatment and, thus, present a complicated dilemma for the physician, there is good reason for selected patients with certain kinds of cancers to be referred to the State Cancer Center for primary treatment. For example, there are complicated tumors that are known to require multimodality treatment at the onset. They include tumors of the lymphatic system, advanced carcinomas of the breast or ovary, advanced malignancies of the head and neck and most melanomas. Large tumors of the pelvic organs, extremity, truncal soft tissues and upper abdomen may be rarities in most hospitals and practices, but the Center's facilities and the staff's accumulated experience are available for accomplishing the highly specialized procedures that these cancers demand without exception. This is not to imply that the Cancer Center in Columbia is the only place in the state capable of handling the types of cases described here. However, it is the only place in the state where the multimodality approach to therapy is traditional and applied from the day the patient is first seen. Also, it is the only place in the state where truly indigent and medically indigent patients are welcomed.

Ellis Fischel, M.D.

The late Dr. Fischel was born on July 3, 1883. A 1904 graduate of Harvard University, he was named the first chairman of the Cancer Committee of the Missouri State Medical Association among his many other accomplishments and recognition in the field of medicine. Dr. Fischel died in a tragic automobile accident on May 14, 1938. He had written that of himself, "the greatest interest in life as I have found it is in my daily contact with my fellow man, both in health and disease. The greatest rewards come through what we personally mean to a few obscure individuals. The greatest thrill is from public recognition of work well done."[2]

Reference

1. Kaltenbach, M. L.: Ellis Fischel State Cancer Center: A New Name, A New Beginning. Mo. Med. 79:638-639, 1982.
2. Soule, Samuel D.: Dr. Ellis Fischel. Mo. Med. 76:627-628; 532.

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Value of Laparotomy in the Staging of Hodgkin's Disease

An Analysis of 100 Consecutive Patients

WITH THE ADVENT of combination chemotherapy[1] and improved techniques in the use of radiotherapy,[2] Hodgkin's disease has been one of the diseases for which improved survival statistics have been shown. Treatment failures in those patients receiving radiation therapy have been attributed to the lack of detection of disease in nontreated areas and there has been a hesitancy to use combination chemotherapy in all patients because of the associated morbidity. Staging laparotomy has been introduced as a means of accurately detecting disease in the abdomen, but this procedure is not without its own morbidity and mortality.[3, 4] In order to evaluate the role of diagnostic laparotomy for this disease, we have analyzed 100 consecutive patients undergoing this procedure at a single institution and have compared the clinical stage to the pathologic stage. This was done to determine whether patients could be managed satisfactorily by thorough clinical staging alone. This report evaluates the changes in staging resulting from the routine use of the diagnostic laparotomy.

METHODS

A study was formulated that included all cases in which the diagnosis was Hodgkin's disease at the David Grant USAF Medical Center at Travis Air Force Base in California between 1969 and 1980. All pathological material was reviewed by the Armed Forces Institute of Pathology where the diagnosis was confirmed in each instance. The patients were entered on protocol study designed to evaluate the clinical presentation, the relative value of diagnostic procedures, the effects of treatment and the ultimate survival time.

All patients were admitted to the hospital where they had a thorough history and physical examination. Routine evaluation studies included complete blood cell count, sedimentation rate, urinalysis, serum glutamic oxaloacetic transaminase (SGOT), serum alkaline phosphatase, serum bilirubin, lactic dehydrogenase, delayed hypersensitivity skin testing, serum protein electrophoresis, serum immunoglobulins, chest x-ray, bilateral lower extremity lymphangiogram, intravenous pyelogram, liver spleen scan, bone scan and bone marrow specimen biopsy. Galium scans, abdominal ultrasound and computerized axial tomography were added during the past three years, but the number of patients having these studies was small and thus these procedures are not included in this evaluation.

Exploratory laparotomy included splenectomy, biopsies of specimens of both lobes of the liver and sampling of para-aortic, iliac and mesenteric nodes. All suggestive nodes identified by lymphangiogram and all other suggestive nodes were excised. An open iliac crest bone marrow biopsy was also done in most cases.

Dr. Reynolds is Director of the Department of Medicine, Ellis Fischel State Cancer Center (EFSCC), and Senior Scientist at the Cancer Research Center (CRC). Dr. Sonoda is Chief, Hematology Section; Dr. O'Dell is Chief, Radiation Oncology Service; Dr. Niemtzow is Chief, Radiation Therapy Section; Dr. Mitchell is Chief, Medical Oncology Section; Col. San Diego is Chairman, Department of Pathology; Ms. Anson is Cancer Research Assistant; Col. Takamoto is Chairman, Department of Surgery, David Grant USAF Medical Center, Travis AFB, California; and Dr. Greenberg is Associate Professor of Medicine, University of California-Davis School of Medicine.

TABLE 1
HODGKIN'S DISEASE STAGING CLASSIFICATION

Stage	*Subclassification*
I. Disease in one site	A. No symptoms
II. Disease in two sites on same side of diaphragm	B. Any of the following symptoms:
III. Disease above and also below the diaphragm	Unexplained fever, with oral temperature above 38 C.
IV. Diffuse involvement of at least one extra-lymphatic organ or tissue. Involvement of liver or bone marrow.	Night sweats
	Unexplained weight loss exceeding 10% of body weight in six months.

Prior to consideration for laparotomy, the patient was assigned a clinical stage (Table 1). If the bone marrow biopsy was found to be positive or if the result of a percutaneous liver biopsy was found to contain Hodgkin's disease, the patients were not considered for laparotomy and are not included in this report. Patients who had either palpable splenomegaly, splenomegaly on nuclear scan or who had discrete splenic defects on nuclear scan were considered to have clinical involvement of the spleen for purposes of the analysis. Those with two or more liver function abnormalities or whose liver scans showed filling defects were considered to have clinical involvement of the liver even though the results of a percutaneous liver biopsy may have been negative.

Those patients with definitely positive lymphangiograms or who had equivocal lymphangiograms were considered to have clinical stage III disease.

All cases were classified according to the Ann Arbor staging system. Patients with subsequent pathological stages (PS) IA and IB were treated with radiotherapy alone. Those with PSIVA and IVB received chemotherapy alone, while patients with intermediate disease usually received a combination of the two treatment modalities, although some patients with PS IIIA disease received only radiotherapy. In most instances, total nodal radiotherapy with a tumor dose of 4,400 rads was administered. Those with IA, IB and IIA disease received either regional or extended field radiotherapy.

Following completion of therapy, the patients were observed every three months for two years and then every six to 12 months thereafter. With each followup visit, all of the routine evaluation studies were repeated with the exception of the lymphangiogram and intravenous pyelogram. A kidney-ureter-bladder (KUB) x-ray of the abdomen was obtained to follow the node pattern created by the lymphangiogram. Data were entered on the protocol forms and tabulated for analysis.

Results

One hundred consecutive patients undergoing laparotomy for staging of Hodgkin's disease were analyzed. The patient characteristics are in Table 2. The median age was 24 years. Seventy-five percent were men and 25% were women. There were 49 patients with mixed cellular Hodgkin's disease, 36 patients with nodular sclerosis, 13 with lymphocyte depleted and two with lymphocyte predominant disease. There were 40 (82%) men with mixed cellular, 25 (69%) men with nodular sclerosis and eight (62%) men with lymphocyte depleted diseases; both patients with lymphocyte predominant disease were men. The median age was 28 years for mixed cellular, 20.5 years for nodular sclerosis, 23 years for lymphocyte depleted and 34.5 years for lymphocyte predominant disease.

The changes in the numerical designation of the stage are shown in Table 3. There was no change due to the results of the diagnostic laparotomy in 23 (48%) of mixed cellular, 21 (58%) of nodular sclerosis, eight (62%) of lymphocyte depleted and two (100%) of the lymphocyte predominant cases. The stage was increased as a result of the laparotomy in 13 (26%) cases of mixed cellular, nine (25%) of nodular sclerosis and one (8%) case of the lymphocyte depleted group. The

TABLE 2

Histologic Type	*Cases*	*Sex* *Men*	*Women*	*Age* *Mean*	*Median*
Mixed Cell Type	49	40	9	31.3	28.0
Nodular Sclerosis	36	25	11	24.8	20.5
Lymphocyte					
Depleted	13	8	5	33.2	23.0
Predominant	2	2	0	34.5	34.5
Total	100	75	25	29.3	24.0

TABLE 3

Histologic Type	*No. Cases*	*Results of Laparotomy* *No Change*	*Higher Stage*	*Lower Stage*
Mixed Cell Type	49	23	13	13
Nodular Sclerosis	36	21	9	6
Lymphocyte				
Depleted	13	8	1	4
Predominant	2	2	0	0
Totals	100	54	23	23

stage was decreased in 13 (26%) cases of mixed cellular, six (17%) of nodular sclerosis and four (30%) of lymphocyte depleted patients.

Overall, the condition of 54 (54%) of the patients remained unchanged after examination of tissue obtained at laparotomy, while the stage was increased or decreased by the procedure for 23 (23%).

An analysis of the accuracy of the prestaging procedures to match the final pathological stage is shown in Table 4. The distribution by clinical stage showed a preponderance of stage I in lymphocyte predominant, stage IV in lymphocyte depleted, stage III in mixed cellular and stage II disease in nodular sclerosis. In general, stage I disease was accurately predicted in all histologic types (14 of 15 cases for 93% accuracy). Stage II disease was most accurately predicted for nodular sclerosis (11 of 14 cases for 79% accuracy). Stages III and IV were more difficult to predict.

Overall, stage II disease was accurately predicted by clinical means in 15 of 27 cases (56%), stage III was predicted in 14 of 39 cases (36%) and stage IV in eight of 19 cases (42%). All changes in the clinical stage II cases were to a higher stage, while the changes in clinical stage III included nine to a higher stage and 12 to a lower stage.

The accuracy of our clinical assessment of splenic involvement was analyzed in Table 5. In the lymphocyte depleted type, splenic involvement suspected by clinical staging was fairly accurate. In other histologic subtypes, clinical evaluation of splenic involvement was incorrect most of the time. Overall, only 35% of the patients who were suspected of having splenic involvement on the basis of clinical staging procedures had involvement of that organ when examined pathologically. Conversely, 19 of 22 (86%) had demon-

TABLE 4

Histologic Type	*Clinical Stage*	*No. Cases*	*Results of Laparotomy* *No Change*	*Higher Stage*	*Lower Stage*
Mixed Cell Type	I	6	6	0	-
	II	11	2	9	0
	III	24	12	4	8
	IV	8	3	-	5
Nodular Sclerosis	I	5	4	1	-
	II	14	11	3	0
	III	12	3	5	4
	IV	5	3	-	2
Lymphocyte Depleted	I	2	2	0	-
	II	2	1	1	0
	III	3	3	0	0
	IV	6	2	-	4
Lymphocyte Predominant	I	2	2	0	-

TABLE 5
CLINICAL EVALUATION OF SPLENIC INVOLVEMENT

Histologic Type	*Pathologically Negative* *Suspected*	*Unsuspected*	*Pathologically Positive* *Suspected*	*Unsuspected*
Mixed Cell Type	24 (96%)	1	10 (42%)	14
Nodular Sclerosis	22 (91%)	2	7 (58%)	5
Lymphocyte Depleted	3 (100%)	0	10 (100%)	0
Lymphocyte Predominant	2 (100%)	0	0 (—)	0

strable Hodgkin's disease of the spleen in the absence of any clinical suspicion.

DISCUSSION

An accurate assessment of the evaluation of the patient with Hodgkin's disease requires an elaborate series of studies that require meticulous analysis by several specialists in the medical field. It is usually the medical oncologist who is charged with the coordination of the data and with the decisions regarding the need for additional studies to define the extent of disease. With increasing numbers of diagnostic studies, the role of coordinator has become complex and it is not uncommon to have various test results that suggest conflicting information.

In this series, we have assumed that if a given result suggests an abnormality, then it is incumbent upon the physician to confirm histologically or deny the suggested abnormality.

This vigorous approach to the patient with Hodgkin's disease has demonstrated that the clinical staging of most patients cannot be relied on for determining the localization of involved disease sites. The information obtained is of importance to the surgeon since it defines areas for which a biopsy must be done to prove or disprove the presence of disease. Intraoperative diagnostic studies may be used to be sure that the suspected areas have received proper surgical attention. In the final analysis, it is the expertise of the surgeon that will determine the accuracy of the evaluation of the patient. By using the results of the clinical staging procedures and by searching in areas that have the highest probability of being involved with disease, the accuracy of the diagnostic laparotomy should approach 100%.

The overall accuracy of 54% in determining the eventual pathological stage of this series of cases of Hodgkin's disease may be viewed in any one of several ways.[3, 5-8] The first conclusion is that clinical staging is not accurate enough to be considered reliable in determining patient management. The relatively low predictability rate would have been even less accurate if the individual variations within each stage had been considered. The sex distribution in our series was 3 men to one woman. While this sex distribution is similar to a report in another series,[9] it is weighted more heavily toward men than most reported series.[2, 4, 6]

The median age in our series was 24 years which is slightly lower than is usually reported, while the overall distribution of age by histologic type is comparable to other series.[3, 4, 6, 8, 9] The relative predominance of mixed cellular type is also similar to that reported in most series. The accuracy rate in predicting the correct stage was also found to be 56% in a similar series of 99 patients.[8] The differences in staging in that series was due to splenic disease and to disease in the upper para-aortic lymph nodes, since these are difficult areas to evaluate clinically. Since these areas usually would be treated by radiotherapy, the inability to detect this disease through the use of clinical staging procedures was not considered to be a serious defect in treatment planning. There were nine (9%) of the patients whose therapy would have been erroneous had the staging laparotomy not been performed.[8]

In our series, we found that stage I disease could be predicted with a reasonable degree of accuracy (93%). Our analysis showed that 14 of 15 patients had stage I accurately predicted by clinical staging procedures. In the single case for which the clinical staging was found to be in error, disease was found to exist in the spleen. The radiation therapy field would have included this area of involvement. It could, therefore, be argued that clinical staging is adequate for those found to have stage I disease.

For those with clinical stage II disease, stage of disease in 13 of 27 patients had to be changed as a result of the laparotomy. Eleven were changed to stage III and two to stage IV. Both of the stage IV cases were classified as such as a result of disease being found in the liver, although disease also was found in the spleen. Of the 11 patients whose disease stage was changed from clinical stage II to pathological stage III, ten had splenic involvement and one had high para-aortic nodal involvement. In addition, three had mesenteric node involvement, two had splenic hilar node involvement and one had a positive iliac node.

Of the 39 patients with clinical stage III disease, the stage was changed after laparotomy in 21 (54%). Nine were found to have liver involvement and the other 12 patients had their stage reduced as a result of the laparotomy. Five had been considered to have both an abnormal liver-spleen scan and an abnormal lymphangiogram, five had only an abnormal lymphangiogram and one had only an abnormal liver-spleen scan.

Of the 19 cases of clinical stage IV disease, the stage was reduced in 11 (58%) of the cases. Of these 11 patients, six had two or more abnormal liver function tests; three had a combination of

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DINAH K. PEARSON, CHARLES W. BLACKWELL, M.D.
and NED D. RODES, M.D., *Columbia*

Colorectal Cancer Detection in an Asymptomatic Population

COLORECTAL CANCER is the most common form of cancer in the United States. The American Cancer Society estimates that 123,000 new cases will be diagnosed in 1982.[1] Other developed countries have a similar, high incidence of colorectal cancer. Studies show that this may be due at least partially to the Western diet that consists of more meat, animal fat, refined sugar and less roughage.[2]

A number of risk factors for colorectal cancer have been identified. These include age (over 40 years), previously diagnosed colorectal cancer, family history of colorectal cancer, multiple polyps and certain conditions that include mucosal ulcerative colitis, Crohn's colitis and Gardner's syndrome. While the significance of these risk factors varies and is difficult to assess accurately, all have proved to have a higher than expected association with colorectal cancer when compared with the general population.[3]

Among the elderly, cancer of the colon is especially serious. In the United States, no other cancer, except skin cancer, is diagnosed more often in men and women between the ages of 55 and 74 years. Only lung cancer causes more deaths. In Americans over 75 years of age, no cancer is more deadly. The death rate has not changed for more than 50 years in spite of all medical and surgical advances.[4] In 1982, approximately 57,100 Americans will die of colon cancer.[1]

The prognosis for individuals with colorectal cancer is related directly to the stage of the disease at the time of diagnosis. Patients with Duke's stage A, that is confined to the mucosa, have a five-year survival rate of almost 90%. Those patients with metastasis to the regional lymph nodes have a five-year survival of only 27%.[5] Regardless of how the disease is diagnosed, the best prognosis exists for those persons whose diseases are diagnosed in an asymptomatic stage. The survival rate is somewhat better for patients with cancers of the colon as compared with those with rectal cancers.[2]

Almost all cancers of the colon and rectum bleed intermittently. It is possible, therefore, to do screening for colorectal cancers by using the simple and inexpensive guaiac-impregnated slides (Hemoccult). This test is most effective and renders the fewest "false positives" when patients who are screened follow a simple meat-free, high-fiber diet for 48 hours and then collect samples from three consecutive bowel movements.[3] The false negative rate is reduced when these specimens are examined promptly after collection. Ideally, the specimens should be examined on the day of the final collection, but never more than four days after the collection of the third specimen.

The Women's Cancer Control Program (WCCP) at the Cancer Research Center in Columbia has offered Hemoccult as part of each participant's annual visit for the past three years. Each woman is mailed a Hemoccult II kit along with her appointment letter. Detailed instructions regarding the diet and collection of specimens are included. The participant is encouraged to start the diet five days prior to her scheduled appointment so that the final specimen collection will occur on the day of the appointment. Although this test is an optional part of the annual screening visit, more than 95% of the participants find this procedure aesthetically satisfactory and complete the procedure. Although not all women have three bowel movements during the three-day period, more than 99% of the slides submitted are prepared properly.

During the three-year period which began in the fall of 1979 and ended on June 30, 1982, 6,735 asymptomatic women had participated in the WCCP. A total of 14,664 annual visits were accomplished during this period and almost 14,000 sets of Hemoccult II slides were submitted for evaluation. Four hundred and fifty-four of these tests were interpreted as positive. That is, there was at least a trace of blood present in one or more of the slides submitted. (In most cases, six slides, two slides from each of three consecutive bowel movements, are submitted.)

Whenever a Hemoccult II test is interpreted as positive for blood, the WCCP medical staff notifies the participant and her private physician of the finding and suggests that the participant have an appropriate diagnostic workup to determine the source of the bleeding. The procedures recommended are colonoscopy and air-contrast barium enema. This recommendation is based on a study at the University of Minnesota, under the direction of Victor A. Gilbertsen, M.D., where a randomized, controlled study of occult blood in stool specimens is being conducted on 48,000 asymptomatic participants between the ages of 50 and 80 years. Each person whose test results are positive is taken to the University of Minnesota Hospital in Minneapolis for a complete colonic workup, including colonoscopy. When total colonoscopy cannot be accomplished, the participant also has an air-contrast barium enema.[6]

Each participant in the WCCP who receives a recommendation for colonic workup is observed to learn which, if any, diagnostic procedures are performed. There is inevitably a significant lagtime between the positive Hemoccult test results and the time complete reports of the workup are obtained. To date, however, the following information concerning the 454 positive Hemoccult cases has been obtained. Ten women did not contact their physicians and an additional eight refused to have any sort of workup performed. In 28 cases, the physician decided that a colonic workup was unnecessary. In 121 cases, the Hemoccult II test was repeated and interpreted as negative. In 16 cases, the repeated Hemoccult test result was positive, but no further diagnostic studies were initiated. These numbers account for 183 women who received virtually no workup.

Two hundred and sixty-one reports of diagnostic workup have been received. These include 59 instances in which the women received at least a colonoscopy and barium enema; 18 received at least a colonoscopy; 68 had at least a barium enema and proctosigmoidoscopy; 68 had at least a barium enema; 32 had at least a proctosigmoidoscopy; three had at least an upper gastrointestinal (GI) test; and 13 women had other diagnostic studies. Complete followup information is still pending in regard to the remaining ten participants.

Among the 261 women who had a colonic workup, the condition of ten was diagnosed as malignant, 26 had benign polyps (which are considered by many to be premalignant), 41 had diverticulosis, 26 had hemorrhoids, 42 had other benign conditions and the rest had no definitive diagnosis.

Colorectal cancer is the most common cancer occurring in people in the United States with the exception of skin cancers. The prognosis for people who have colorectal cancer is related directly to the stage of its detection. If it is detected, diagnosed and treated at an early stage, it is often curable.

Ms. Pearson is Administrative Coordinator and Dr. Blackwell is Radiologist and Senior Scientist, Women's Cancer Control Program at the Cancer Research Center. Dr. Rodes is Medical Director, Women's Cancer Control Program and Administrative Director of the Cancer Research Center. He served as Acting Director of Ellis Fischel State Cancer Center until Dec. 1, 1982.

This investigation was supported by Grant No. RR 05824 from the National Institutes of Health, DHHS.

Other studies have shown that when asymptomatic individuals over the age of 40 years are screened, approximately 1% of the participants will have positive test results. When these people are subjected to thorough colonic workups, approximately 10% whose test results were positive are found to have cancer. An additional 30% to 40% have neoplastic polyps.[4]

It is apparent that many of the WCCP participants with positive Hemoccult II test results are not given thorough workups. As a result, many early colon cancers and polyps are undiagnosed. Although colonoscopy is not readily available in many of Missouri's small communities, the medical staff of the WCCP provides an opportunity, in each letter reporting positive test results, to help to make arrangements for the colonoscopic examination to be performed at a convenient location any time it is unavailable locally.

Remembering that asymptomatic patients have the greatest opportunity for long-term survival and since colonoscopy is available in many locations throughout the state, it is unfortunate that many participants in the WCCP will be denied the opportunity for the diagnosis and treatment of early-stage colon cancer or the preventive measure of polypectomy. Because of the special dietary precautions that participants in the WCCP follow, false positive test results are few. In view of these facts, if the WCCP recommends a thorough workup, it is probably warranted.[7]

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T. HEWITT McELROY, D.D.S., *Columbia*

Orodental Management of the Chemotherapy Patient

ALTHOUGH THE administration of cytotoxic chemotherapeutic agents is intended to destroy rapidly proliferating tumor cells, some normal cells are adversely affected. This is particularly true of those with high renewal rates, such as the gastrointestinal mucosa and hemopoietic bone marrow. Oral side effects are due to direct mucosal injury by antineoplastic agents and, secondarily to myelosuppression (leukocytopenia, anemia, thrombocytopenia, immunosuppression) that may be disease-induced or chemotherapy-induced or both. Oral complications that include stomatitis, infection, hemorrhage, pain and nutritional detriment may disrupt the course of treatment, decrease treatment prognosis and even prove fatal to the patient.[1-3]

Mucosal injury and myelosuppression are common adverse side effects of chemotherapy. The other problems listed above can be minimized or prevented by careful oral health management before and during chemotherapy and in periods of remission.[4, 5]

ORAL COMPLICATIONS OF CANCER CHEMOTHERAPY

Many antineoplastic chemotherapeutic agents cause adverse physiologic reactions. Those agents known to produce myelosuppression and mucosal damage include nitrogen mustards, nitrosoureas and other alkylating agents, the antimetabolites, the plant alkaloids, the antineoplastic antibiotics and miscellaneous drugs including enzymes, substituted ureas, methyl hydrazine derivatives, and platinum complexes. The toxic effect of these drugs is additive in protocols utilizing multiple agents.[6, 7]

STOMATITIS

Oral complications stem primarily from direct chemotherapy-induced mucosal damage that results in stomatitis. Additionally, some agents reduce salivary flow and cause xerostomia and a decrease in mucosal lubrication. Mucosal surfaces become inflamed, fragile and easily traumatized by incorrect dental hygiene practices, rough teeth and restorations, prostheses, food and chemical irritants, feeding tubes, tongue and cheek biting and other irritants.

INFECTION

During stomatitis and mucosal sloughing, the integrity of the mucosa is lost and pathogens can invade local tissues and enter the circulatory system. The oral cavity, a habitat for many opportunistic microorganisms, is an obvious potential source of infection in the suppressed patient and may account for many fevers of otherwise undetermined origin. In the absence of frank oral infections such as gingivitis, periodontitis dental abscess, the risk is significant. This risk increases if preexisting oral infections are present when chemotherapy is started. Risk of infection and fever is decreased if these entities are resolved prior to chemotherapy.[8-10] Infection can cause great discomfort, interrupt cancer therapy, prolong hospitalization, be detrimental to the patient's prognosis and become life-threatening.

HEMORRHAGE

Chemotherapy- and disease-induced thrombocytopenia and disruption of coagulation mechanisms predispose the patient to hemorrhage.[11, 12] Under conditions of stomatitis and in the presence of infection or mucosal irritants described above, oral hemorrhage becomes a threat. Access to and treatment of oral bleeding can be difficult. Even with the advent of platelet transfusions, oral hemorrhage remains a danger.

PAIN AND NUTRITIONAL CONSIDERATIONS

Oral pain and discomfort result from mucositis and chemotherapy-induced neuropathy. A certain amount of discomfort may be unavoidable. Measures taken to minimize and prevent stomatitis and infection will minimize pain as well.

Cancer patients should maintain a good nutritional status through normal oral feeding. Oral pain from stomatitis can interfere with mastication and deglutition and, thereby, limit a patient's ability or willingness to eat. When pain is minimized, the patient is more willing to eat properly.

Orodental Management Procedures

Orodental management can be categorized into three phases: prechemotherapy management, management during chemotherapy and follow-up management.[4]

Prechemotherapy Management

It is strongly recommended that all chemotherapy patients be given a prechemotherapy dental examination and necessary treatment. Potential sources of infection and irritation can be identified and alleviated. Dental procedures required prior to chemotherapy include treatment of gingivitis, periodontitis, and dental abscesses. Also important are dental prophylaxis, restoration and polishing of rough and decayed teeth and fluoride prescription (possibly including custom polyethylene applicators). Patients should be counseled in regard to possible oral complications, oral hygiene and self-care, proper use of prostheses and the avoidance of mucosal irritants. These procedures usually can be accomplished during the few days required for prechemotherapy workup and preparation.

When surgical treatment is required for pathological reasons, delay of chemotherapy for five days to preferably two weeks is necessary. If, after consultation with the dentist, the medical oncologist decides that delay is not feasible and may endanger prognosis, surgery can be postponed until between courses of chemotherapy when blood values permit surgery and sufficient healing time can be allowed. Infection is a potential problem in such instances and proper prophylactic antibiotic coverage can be applied. The risk of inducing suppression in the presence of infection must be realized by the practitioner. Preventive measures taken prior to chemotherapy will minimize or prevent stomatitis, infection, hemorrhage and pain.

Management During Chemotherapy

This phase of oral management entails monitoring oral health as affected by chemotherapy, maintenance of oral hygiene and treatment of stomatitis and emergencies, such as infection and hemorrhage.

Stomatitis. Stomatitis and associated pain often can be controlled with proper oral hygiene and aids such as oral rinses. Some practitioners have developed oral rinses to minimize and treat stomatitis but have erred in assuming their rinse can be applied universally or that the rinse is the only oral management required for their patients. Oral care must be tailored to the specific needs of the patient. Table 1 lists some effective stomatitis aids. Rinses containing antibiotics are not always necessary. Often the best rinses are also the simplest and least expensive, such as normal saline or salt-soda (5 cc sodium bicarbonate/500 ml normal saline). Sometimes, anything more than water can create pain. Saliva substitutes can be helpful for xerostomia. Fluoride regimens control bacterial plaque and its toxicity. Lanolin hydrous is excellent for lip care and will minimize drying, cracking and pain that might interfere with mouth opening for eating and oral care.

Medicaments that should be avoided for the chemotherapy patient include the following:

1. Petrolatum-based substances and glycerin (except in small dilute quantities) because of their anhydrous, dessicating quality
2. Commercial mouthwashes and most toothpastes because they contain alcohol, phenol, glycerin, oils and other chemicals that may be detrimental
3. Acidic substances such as lemon and glycerin swabs. Hydrogen peroxide should be diluted to .5% strength.

Infection. Infection must be treated promptly. Culture and sensitivity and gram-stain smears will enable pathogen identification and antibiotic selection. Oral infections may become manifest in systemic fever or disseminated infection. Antibiotic suspensions that are swished and swallowed can help locally and systemically. Oral candidiasis can be treated with nystatin suppositories used as oral lozenges and allowed to dissolve in the

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Proper orodental health management can provide many benefits for the cancer patient. Oral complications (including stomatitis, infection, hemorrhage and pain) and systemic complications of oral origin (infection and fever) will be minimized or prevented by adequate oral care prior to, during and after chemotherapy.

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mouth. Occasionally, oral infection requires further intervention, such as endodontic or incisional access and drainage of exacerbated dental abscesses. Incision and drainage and other emergency surgical procedures should be carried out only after careful assessment of blood values (absolute granulocyte count of 1000/mm^3 or higher, platelet count of 50,000/mm^3 or higher with platelet transfusion standby, and adequate coagulation profile) and with appropriate prophylactic antibiotic coverage. In any instance, all factors of risk vs benefit must be considered. At times, the treatment of choice is the use of antibiotics and postponement of definitive procedures until between courses of chemotherapy when blood values are within acceptable ranges and sufficient healing time can be allowed.

Hemorrhage. Oral hemorrhage can be very difficult to treat. Accumulated blood must be removed to identify the bleeding site and pressure-packing must be applied to the area. Blood must be removed carefully to avoid dislodgement of any clot that may be forming. If excess blood is not removed, a patient could aspirate the blood and conceivably suffocate. Platelet transfusion may be essential.

When the platelet count drops below 50,000/mm^3, the oral cavity and platelet level should be evaluated frequently. Indications of a tendency to hemorrhage include hemorrhagic oozing of the gingivae, oral petechiae, skin purpura and a bloody taste in the mouth. At platelet levels below 50,000/mm^3, the patient should follow an oral hygiene regimen of cleaning with Toothettes (Halbran, Inc., Willoughby, Ohio), gauze, soft cotton swabs and .5% hydrogen peroxide, normal saline or a combination of these aids. Cleaning should be done in the morning, after eating and at bedtime. The mouth should be kept moist with water, normal saline or salt-soda solution. Mechanical cleansing and hydrogen peroxide should be discontinued if the platelet count drops below 20,000/mm^3, but oral rinses should be continued. Flexible polyethylene fluoride applicators can serve as mucosal guards to protect the gingival, lingual and buccal mucosae from trauma that may induce hemorrhaging.

Pain and Nutritional Considerations. Pain is treated symptomatically with the preventive measures previously discussed, topical medicaments, oral rinses and analgesics. Chemotherapy-induced neuromuscular pain and severe mucositic pain may require treatment with narcotic analgesics or other medications under the supervision of the primary care physician.

TABLE 1
STOMATITIS AIDS

1. **Water**
2. **0.9% Normal saline**
3. **Salt-soda solution (5 ml sodium bicarbonate/500 ml normal saline)**
4. **0.5% Hydrogen peroxide (also combined with normal saline)**
5. **Artificial saliva (e.g. Xero-Lube)**
6. **Benylin Syrup/Kaopectate (equal parts)**
7. **Benylin Syrup/Maalox/2% Viscous Xylocaine HCl (equal parts)**
8. **2% Viscous Xylocaine HCl (may require dilution)**
9. **Tylenol #3 Elixir**
10. **Lanolin Hydrous Ointment (for lips, external use only)**
11. **Various antibiotics and antifungal preparations can be added to #6 and #7 for oral prophylaxis (Neomycin for control of enteric bacteria, Vancomycin for control of gram-positive bacteria, tetracycline for broad spectrum, Nystatin for yeasts)**

When pain is reduced to minimal, the patient remains more comfortable and normal eating usually can be maintained. Hot, spicy, acidic and coarse foods should be avoided. Consultation with an oncology-experienced clinical dietician will enable proper monitoring of the patient's nutritional status as well as determination of appropriate diet and necessary food restrictions.

Follow-up Management

Continuing orodental management is an important part of patient follow-up. Definitive procedures that may have been postponed during chemotherapy can be performed. After chemotherapy, many patients are compromised to some degree and oral health management and hygiene should be maintained. This management is important, as well, in light of the possibility of recurrent disease and in continuance of palliation for the duration of patient survival.

Discussion

Oral and oral-associated systemic complications of chemotherapy have been described, as well as available measures to prevent, lessen and treat complications. The benefits gained by proper orodental management of the chemotherapy patient are many.

Proper oral care will reduce the severity of stomatitis and pain. By eliminating existing and potential sources of infection and irritation prior to chemotherapy, the risk of infection and hemorrhage during chemotherapy is reduced. Prechemotherapy evaluation provides the advantage of foresight in managing complications which may arise. The reduction or prevention of stomatitis, pain, infection and hemorrhage enhances the patient's ability to maintain an adequate oral diet and eliminates or reduces the need for narcotics, antibiotics and other medications. In the absence of complications, hospitalization time, required person-hours for care and overall treatment costs will be decreased. The treatment course will proceed more smoothly, interruption in chemotherapy administration will be less likely and prognosis and quality of life will be improved for the patient.

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Hodgkin's Disease

(Continued from page 803)

abnormal liver functions, an abnormal liver spleen scan and an abnormal lymphangiogram. The other two patients had both abnormal liver functions and an abnormal liver-spleen scan.

Treatment was altered as a result of the staging laparotomy in twenty-eight patients (28%).

An error of this magnitude in the accuracy of clinical staging appears to be conclusive evidence for the necessity of performing a staging laparotomy in all patients with Hodgkin's disease who have not had stage IV disease proved histologically by clinical staging procedures or who have been found to have only stage I disease following a complete clinical evaluation.

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Malignant Superior Vena Cava Syndrome

A 15-Year Experience

THE HEMODYNAMIC CHANGES produced as a result of superior vena cava obstruction give rise to a group of clinical signs and symptoms known as the superior vena cava syndrome. First described by Hunter in 1757,[1] this entity has been the subject of several excellent publications.[1-7] Since the report of the first case, the papers by Fischer,[2] McIntyre and Sykes[5] and Kamiya[4] have been considered authoritative. Collective reviews of these publications provided data on 1,236 patients whose cases are recorded in the world literature from 1757 to 1967, spanning more than 200 years.

It is interesting to observe how newer diagnostic capabilities and treatment modalities have changed the approach to the management of this entity. In the most recent literature, it has become evident that superior vena cava obstruction of malignant origin comprises up to 97% of all causes,[8] the majority of them due to lung cancer. Also, as the incidence of pulmonary malignancies increases, more patients can be expected to develop the syndrome. A decline of benign conditions is also apparent, particularly the low incidence of luetic thoracic aortic aneurysms that comprised 28% to 35% of cases in the 1940s and early 1950s.

During the past two decades, the literature on this subject has placed emphasis on clinical management, refinement and safer application of diagnostic modalities, importance of tissue diagnosis and treatment of the underlying malignant condition.[8-13] The publication of a prospective randomized study in 1969[14] for the treatment of malignant superior vena cava obstruction attests to the efforts of searching for more effective management. Treatment is highly selective and there is no standard radiotherapeutic fractionation or chemotherapeutic regimen acceptable to all. In many instances, varieties of therapeutic modalities are used in a desperate attempt to control an advancing and highly lethal malignancy. Although the typical clinical presentation makes the diagnosis relatively simple, superior vena cava syndrome remains a therapeutic challenge to the physician dealing with oncologic emergencies.[15] The purpose of this report is to share the experience in the management of this difficult problem at Ellis Fischel State Cancer Center in Columbia, Mo.

MATERIALS AND METHODS

The records of 42 patients who had superior vena cava syndrome at Ellis Fischel State Cancer Center during a 15-year period between 1965 and 1979 were reviewed in detail and form the basis of this report. Age, sex, symptomatology, histologic confirmation, treatment modalities, result of treatment and survival time were obtained for all patients. The description of the initial signs and symptoms as well as follow-up documentation made assessment of response to treatment and quality of survival highly reliable. Follow-up was complete in all cases.

RESULTS

There were 29 men and 13 women in this group. Ages ranged from 34 to 81 years, with a mean of 55. The causes of superior vena cava obstruction among these patients is shown in Table 1. Cancer of the lung accounted for 70% (30/42) of all cases. Most common among malignancies of pulmonary origin was squamous cell carcinoma (13 cases), followed by undifferentiated carcinoma (11 cases) and small cell carcinoma (six cases). In 10% of the patients (4/42), advanced carcinoma of the breast was the primary malignancy. Unclassified malignant tumors and undifferentiated carcinoma of thyroid origin contributed two cases each. Melanoma, malignant thymoma, carcinoma of the cervix and undifferentiated lymphoma accounted for the remaining four cases.

Among the symptoms of superior vena cava syndrome, edema of the face and upper extremities, prominent distension of the venous collaterals of the head and neck and upper torso and severe dyspnea were present in 96%, 86% and 79% of the patients respectively. Hemoptysis was

TABLE 1
MALIGNANT SUPERIOR VENA CAVA SYNDROME: ETIOLOGY AND RESPONSE TO TREATMENT, ELLIS FISCHEL STATE CANCER CENTER, 1965-1979

Causes	*No. of Patients*	*Percent*	*Complete Response*	*Partial Response*	*No Response*	*No Treatment*
Squamous cell carcinoma of the lung	13	32	4	4	3	2
Undifferentiated carcinoma of the lung	11	27	4	4	2	1
Small cell carcinoma of the lung	6	15	3	—	2	1
Carcinoma of the breast	4	10	1	1	2	—
Unclassified malignant tumors	2	5	2	—	—	—
Undifferentiated carcinoma of the thyroid	2	5	1	1	—	—
Melanoma	1	2.5	—	—	1	—
Malignant thymoma	1	2.5	—	—	1	—
Carcinoma of the cervix	1	2.5	—	—	1	—
Lymphoma	1	2.5	1	—	—	—
Total	42	100	16	10	12	4

the fourth most common original symptom that occurred in six patients with pulmonary malignancy. Other associated symptoms such as intense lacrimation, anterior chest pain and persistent cough were present in fewer than 10% of cases. Stridor, dysphagia, Horner's syndrome and the so-called "wet brain" syndrome were present in 2.5% of all cases. The incidence of signs and symptoms of superior vena cava obstruction in this group is shown in Table 2.

Definition of Response

A complete response is defined as the total disappearance of neck vein distension and edema of the head and neck and upper extremities, marked improvement of the respiratory status and resumption of nearly normal activities at home (Karnofsky performance status 80-70). Partial response is characterized by incomplete or temporary disappearance of one or more major clinical signs or symptoms upon termination of therapy (Karnofsky performance status 60-50). The clinical status of the patients whose cancers did not respond to treatment remains unchanged or further deteriorates (Karnofsky performance status 40-20) (Table 3).

TABLE 2
PRESENTING SIGNS OR SYMPTOMS IN 42 PATIENTS WITH SUPERIOR VENA CAVA OBSTRUCTION, ELLIS FISCHEL STATE CANCER CENTER, 1965-1979

Symptom	*No. of Patients*	*Percent*
Edema of face, neck, upper extremities	41/42	96
Venous distension	36/42	86
Severe dyspnea	33/42	79
Hemoptysis	6/42	15
Lacrimation	3/42	7
Anterior chest pain	3/42	7
Persistent cough	3/42	7
Stridor	2/42	5
Dysphagia	1/42	2.5
Horner's syndrome	1/42	2.5
Wet brain syndrome	1/42	2.5

Telecobalt therapy was used as the only treatment modality for 11 patients with squamous cell carcinoma of the lung; two of the 13 patients with this histologic diagnosis refused therapy. Five of the 11 patients with undifferentiated carcinoma of the lung and two of the six patients with small cell carcinoma of the lung also were treated exclusively with radiation therapy. The remaining patients of each group comprising the pulmonary malignancies were treated with chemotherapy and radiotherapy in combination.

Radiotherapeutic fractionation varied between 200 and 300 rads daily, carried to a total dose of 4,000 to 5,000 rads. In seven patients, an initial

TABLE 3
CLASSIFICATION OF RESPONSE TO TREATMENT

- Complete Response
  - Total disappearance of all major signs and symptoms
  - No distension of neck vein
  - No edema of head and neck and upper extremities
  - Marked improvement of respiratory status
  - Resumption of normal activities (home or work)
  - Karnofsky performance status 80-70
- Partial Response
  - Incomplete or temporary disappearance of one or more major signs and symptoms, as outlined above, upon termination of therapy
  - Karnofsky performance status 60-50
- No Response
  - Unchanged clinical presentation
  - Further deterioration
  - Karnofsky performance status 40-20

Forty-two patients with malignant superior vena cava syndrome were treated at Ellis Fischel State Cancer Center (EFSCC) during a 15-year period. The primary treatment modality was telecobalt although some patients received chemotherapy and radiotherapy in combination. If cancers responded completely to treatment, patients had no recurrent symptoms of occlusion and an average survival time of 15.5 months.

The authors believe that symptom-free survival appears to be related to treatment response. Thus, grade of regression and Karnofsky performance status could form the basis for a semi-quantitative response classification that could be further refined by using CT scans for pretreatment and posttreatment evaluations. They suggest that this classification could be one of the guidelines for a much-needed register for treatment of superior vena cava syndrome.

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high fractionation of 400 to 500 rads was administered in three consecutive days to a total of 1,200 to 1,500 rads and then with conventional fractionation up to 4,000 to 5,000 rads. Nitrogen mustard in a single dose of 0.4 mg/kg of body weight was the chemotherapeutic agent used in treating the majority of pulmonary malignancies. One patient was treated with a combination of 5-fluorouracil (5-FU) nitrosourea and vincristine, and another patient with cyclophosphamide, vincristine and prednisone.

Four breast cancer patients developed superior vena cava syndrome. All patients had received radiotherapy previously to the chest wall and supraclavicular region either as adjuvant treatment following mastectomy or for chest wall or supraclavicular recurrence. Two patients were treated with hormonal manipulation, one with nitrogen mustard and one with doxorubicin hydrochloride (Adriamycin), cyclophosphamide (Cytoxan), and vincristine combination. Among the remaining eight patients with a variety of malignancies, radiotherapy and chemotherapy were used in combination to treat those patients with malignant thymoma, undifferentiated lymphoma, thyroid cancer and an unclassified malignant tumor. Chemotherapy alone was used to treat four patients with melanoma, cancer of the cervix, cancer of the thyroid and an unclassified malignant tumor.

Cancers responded completely to treatment with radiotherapy alone in eight patients with pulmonary malignancy of squamous and undifferentiated histology. Six patients with small cell carcinoma of the lung were treated with combination chemotherapy plus radiotherapy. Cancers in three of these patients responded completely to this treatment. Other pulmonary malignancies were treated in the same manner, but either responded incompletely or not at all. The results of treatment are shown in Table 1.

Among the four breast cancers, only one responded completely to treatment. This patient is the only survivor of the entire group. She received adjuvant cyclophosphamide, methotrexate and flurouracil (CMF) chemotherapy following mastectomy. After a two-year, disease-free interval, she was treated for local recurrence with radiotherapy to the chest wall and supraclavicular region. While receiving therapy, she developed superior vena cava obstruction which was treated with Adriamycin, Cytoxan and vincristine. She remains well one year later.

In two patients with unclassified malignant tumors, one undifferentiated carcinoma of the thyroid and one undifferentiated lymphoma, the cancers responded completely to a combination of radiotherapy and chemotherapy.

In an attempt to determine the reasons for treatment failure in the two groups whose cancers responded incompletely or not at all, the type and dose of treatment were evaluated carefully. Radiotherapy and chemotherapy were used in similar combinations and amounts as compared with the group whose cancers responded to therapy.

The result of treatment indicates that the mean survival time of 16 patients whose cancers responded completely to therapy was 11.5 months and ranged from one to 35 months. Patients with cancers that responded only partially survived 4.5 months and time ranged from one to eight months. In the group whose cancers did not respond, survival was 2.5 months, with a range of one to six months. Four patients who refused therapy survived an average of 30 days. In addition, to determine the influence that single cases of a variety of malignancies had regarding data, survival was calculated in terms of response to treatment for pulmonary malignancies alone. Patients with cancers that responded totally, partially and not at all survived an average of 10.7, 4.7, and 2.1 months, respectively. The relationship between response to treatment and survival is shown in Table 4.

Discussion

Features of this syndrome may be striking or insidious in onset, depending on the rapidity, degree and location of the obstruction. When obstruction occurs between the azygos vein and the right atrium, symptoms are more prominent because all collateral venous return shifts through the inferior vena cava. Edema and plethora of the face and neck, venous collateral distension of the trunk and upper extremities and a variable degree of respiratory distress are classical. Also, there may be palpebral and conjunctival edema and impaired cerebration, particularly in the acute phase, resulting in the so-called "wet brain" syndrome. The association of this symptomatology with Horner's syndrome is not uncommon. In our experience, edema and venous distension of the areas drained by the superior vena cava were the most common presenting signs. Severe dyspnea was a prominent symptom whereas persistent cough and chest pain were present in only 7% of the cases. We agree with Kane and associates[10] that the rapid onset and prominent symptoms are more characteristic of small cell carcinoma of the lung.

The incidence of pulmonary malignancies, especially in women, is increasing. The American Cancer Society estimates that in 1982, approximately 130,000 new cases of cancers of the lung will be diagnosed, 38,000 of these in women.[16] The incidence of superior vena cava obstruction associated with carcinoma of the lung is estimated to occur in from 3% to 15% of the patients.[6, 12] According to Salsali and Cliffton,[12] the incidence of superior vena cava syndrome increased by 1% in the last decade of their study. In view of the rate of incidence of superior vena cava obstruction in pulmonary malignancies, more than 15,000 new cases of this syndrome, associated with lung cancers alone, can be expected to occur in the United States in 1982. Therefore, it is important to: (1) emphasize the seriousness of the problem, (2) develop guidelines for a more uniform management, (3) attack the problem as an oncologic emergency, (4) inform the primary physician that aggressive treatment, even without the benefit of histologic proof, is warranted.

During the 15-year period between 1965 and 1979, 1,398 patients with primary lung cancer were admitted to Ellis Fischel State Cancer Center and diagnosis of superior vena cava obstruction was made in 30, an incidence of 2.2%. The incidence of this syndrome as related to histologic subtypes of primary lung malignancies is shown in Table 5. Squamous cell carcinoma is the most common primary lung cancer and, therefore, produces the largest number of cases. It is apparent, however, that small cell anaplastic carcinoma is the most frequent histologic subtype associated with superior vena cava obstruction.[10]

Institutions report varying causes of malignant superior vena cava syndrome. These differences may depend on ethnic population mix, type of referral (rural or urban) and stage of disease. A comparison is made between two series of patient populations within the state of Missouri (Table 6).

Although pulmonary malignancies accounted for approximately equal percentages of all causes, in the urban population the incidence of small cell undifferentiated carcinoma was higher. The inci-

TABLE 4
SURVIVAL OF 42 PATIENTS WITH MALIGNANT SUPERIOR VENA CAVA SYNDROME, ELLIS FISCHEL STATE CANCER CENTER, 1965-1979

	Results of Treatment	*Survival After Treatment (Months)*
Complete Response	16	11.5
Incomplete Response	10	4.5
No Response	12	2.1
No Treatment	4	1.0
Total	42	4.7

TABLE 5
SUPERIOR VENA CAVA OBSTRUCTION DUE TO PULMONARY MALIGNANCIES: INCIDENCE BY HISTOLOGIC TYPE, ELLIS FISCHEL STATE CANCER CENTER, 1965-1979

Histologic Type	*No. of Patients*	*SVC Syndrome*	*Percent*
Squamous Cell Carcinoma	459	13	2.8
Small Cell Carcinoma	121	6	5.0
Undifferentiated Carcinoma	194	11	5.7
Adenocarcinoma	110	0	0
Total	1398	30	2.2

TABLE 6
COMPARISON OF CAUSES OF SVC SYNDROME AMONG URBAN AND RURAL MISSOURI POPULATIONS

	Urban Population Washington University Perez, et al[15] 84 Patients	*Rural Population Ellis Fischel Series 42 Patients*
Small Cell Undifferentiated	31 (37%)	6 (15%)
Squamous Cell	17 (20%)	13 (32%)
Large Cell Undifferentiated	10 (12%)	11 (27%)
Adenocarcinoma	8 (10%)	—
Other	1 (1%)	—
Total Pulmonary Malignancies	67 (80%)	30 (72%)
Lymphocytic Lymphoma	5 (5%)	1 (2%)
Histiocytic Lymphoma	4 (4%)	—
Mixed Type	3 (3%)	—
Unclassified	2 (2%)	—
Kaposi Sarcoma	1 (1%)	—
Breast	1 (1%)	4 (10%)
Testicular	1 (1%)	—
Melanoma	—	1 (2%)
Thyroid	—	2 (5%)
Cervix	—	1 (2%)
Thymoma	—	1 (2%)
Unclassified	—	2 (5%)

dence of lymphoma as the causative agent was rather rare in our series and represented 14% of all causes in the series by Perez *et al.*[15]

Although the clinical diagnosis of this entity is relatively simple, histologic diagnosis is, at times, difficult to obtain. Due to the marked increase in venous pressure and respiratory impairment, invasive diagnostic modalities that include bronchoscopy, mediastinoscopy, pleural, lymph node and lung biopsies as well as thoracentesis and venous pressure manometry should be performed judiciously. Histopathologic diagnosis is extremely important in view of the effectiveness of new chemotherapeutic agents in the management of certain malignancies, such as lymphoma and small cell carcinoma of the lung. Ideally, tissue diagnosis should be obtained prior to therapy when diagnostic maneuvers can be implemented safely.

Recently, Shimm and coworkers[13] reported no major complications from invasive diagnostic procedures in 28 patients with this syndrome. However, we agree with Lokich and Goodman,[8] Davenport *et al*[9] and Salsali and Cliffton[12] that initiation of therapy can be justified in the absence of histologic diagnosis in cases of acute oncologic emergency. Indeed, a patient with acute respiratory embarrassment, massive edema and markedly elevated venous pressure requires immediate lifesaving therapy.

Treatment of this syndrome has been the subject of controversies.[5, 6, 8, 10-12, 14, 15, 17] Anticoagulants, diuretics and steroids are of limited value. Radiation therapy, chemotherapy or combinations of both are the mainstay of treatments. Since the first report in 1911 by Davis[18] of a patient with superior vena cava syndrome treated with radiotherapy, this modality has remained the first line of treatment for cases of malignant obstruction. The role of surgery is limited, generally, to diagnostic procedures and resection of selected primary mediastinal malignancies. Radiotherapy in combination with nitrogen mustard has been used extensively since 1946. However, no clear evidence exists to support the superiority of combination treatment to either modality alone. In our experience, the addition of nitrogen mustard to radiotherapy did not appear to improve the response of the cancers or prolong survival in patients when they are compared to a group of patients with the same histologic diagnosis and who are treated with radiotherapy alone. In a randomized study, Levitt *et al*[14] found "no apparent advantage to the use of nitrogen mustard prior to irradiation." Salsali and Cliffton[12] also found that survival with a complete course of radiation therapy was the same with or without nitrogen mustard and was much better with the former than with incomplete courses of radiation therapy or chemotherapy alone.

With the availability of more effective chemotherapeutic agents, the management of this syndrome is not in the exclusive territory of the radiation oncologist. This is particularly true in small cell anaplastic carcinoma of the lung and lymphoma, although radiation therapy is known also to be effective for these two malignancies. Kane and associates[10] have shown a dramatic response to combination lomustine, cyclophosphamide and methotrexate chemotherapy in small cell carcinoma of the lung.

Initial high dose radiotherapy has been advocated as the fractionation of choice.[9, 11, 14] From our study, it is not possible to conclude that initial high fractionation such as that advocated by Rubin *et al*[11] resulted in improved survival although it is apparent that the initial response is more rapid. In addition, it is not possible to determine the reasons for the lack of response of some lung cancers to radiotherapy while similar pulmonary malignancies respond to radiotherapy. It is tempting to speculate that the degree of tumor burden and the general condition of the patient at the time of admission may account for this difference.

Treatment Response

The therapeutic response evaluation varies from institution to institution and in general is vague and no definite parameters are used. Most authors have described the response as being excellent, good, minimal or "no response." We propose a new staging system based on sign and symptom changes combined with the Karnofsky status of performance. This system has been helpful in our material analysis and synthesis. This classification could be further refined since CT scans of the chest have become a routine baseline pretreatment investigation.

If a national register for superior vena cava syndrome is implemented in the future, this method of assessment could be used. In contradistinction with the usual clinical presentation of carcinomas of the lung or a tumor response, assessment criteria are somewhat vague and difficult to interpret. The signs and symptoms of the patient who represents with superior vena cava syndrome of pulmonary etiology are acute and intense and could be better evaluated and measured. The same applies to radiological measurements since superior vena cava syndrome usually presents itself with a large dominant mediastinal mass that is easier to evaluate than the more peripheral masses with associated atelectasis.

A review of the literature shows that the relationship between treatment response and survival is not entirely clear. Roswit *et al*[6] found no evidence that the average survival was increased by radiotherapy. In the series by Salsali and Cliffton,[12] the median survival time of 158 days for the treated group contrasts with 21 days for the untreated. However, no data were reported on the relationship between degree of response and survival.

The results of our retrospective analysis indicate that survival is related to the degree of response to therapy. Patients who had disappearance of signs and symptoms of superior vena cava obstruction remained free of recurrence and died of progressive malnutrition, general debilitation, extrathoracic metastasis and progressive respiratory failure. However, many of these patients were able to maintain nearly normal activities at home and a good quality of life. This experience is not unique to our series.[6, 12]

Superior vena cava syndrome of malignant origin is the result of advanced disease, and patient survival is limited. Its presentation is an ominous sign and is attended by distressing symptomatology. The authors feel that prompt histologic diagnosis with the judicious use of diagnostic modalities and immediate initiation of treatment will result in meaningful palliation in a significant number of patients. Long-term survivors are rare, but a five-year survivor with histologic proof of pulmonary malignancy causing superior vena cava syndrome has been reported.[12] Many patients are grateful for even a brief period of relief from such suffering. It is rewarding to be aggressive in the management of this serious oncologic problem.

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President's Message

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11. Annual Convention with scientific programs and exhibits
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21. Negotiate fees with third parties
22. Scheduling expert testimony by physicians before Legislative Committees
23. Field staff services for members
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O Divine Master, grant that I may not so much seek to be consoled as to console, to be understood as to understand; to be loved as to love; for it is in giving that we receive; It is in pardoning that we are pardoned; and it is in dying that we are born to eternal life.

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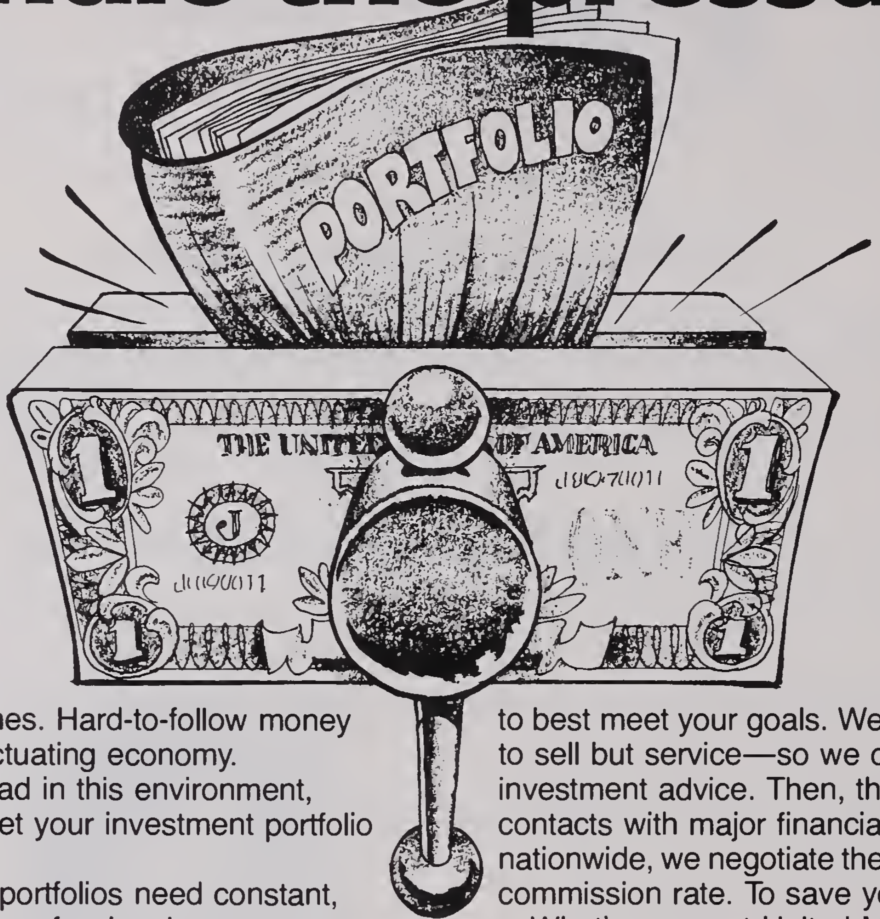

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Notes of interest from Here . . . . and There

Peter G. Danis, M.D., St. Louis, has been named the 1982 recipient of the Distinguished Alumni Merit Award by the University Awards Committee of Gonzaga University in Spokane, Wash. He received the award at a special ceremony held during that University's Founder Week celebration. A practicing pediatrician in St. Louis the past 50 years, Dr. Danis is one of the founding fathers of Cardinal Glennon Memorial Hospital for Children and served as its first chief of staff. A graduate of Gonzaga University, Dr. Danis received his M.D. degree from St. Louis University School of Medicine where he holds the rank of Chairman Emeritus of the Department of Pediatrics/Adolescent Medicine and Professor Emeritus of Pediatrics.

Dr. Marvin A. Singleton, Joplin, has been elected chairman of the Board of Governors of the American Academy of Otolaryngology-Head and Neck Surgery, Inc. The board is an advisory body to the academy board of directors and a communication link to the 120 otolaryngology-head and neck surgery organizations. Dr. Singleton is a graduate of Schreiner Institute, Kerrville, Tex. and the University of the South, Sewanee, Tenn. He received a medical degree from the University of Tennessee Medical School in Memphis and served a rotating internship in City of Memphis Hospitals. He served a rotating surgical residency in Highland-Alameda County Hospital, Oakland, Calif. and an ear, nose and throat residency at the University of Tennessee. He held fellowships in tropical medicine, otolaryngic pathology and otologic surgery. Dr. Singleton is a Member of the MSMA Council from the Eighth District.

Nov. 1, 1982 was **Dr. Joseph Shelton Cope**'s first day of retirement after serving as a physician for 49½ years. Forty of those years were spent serving the residents of Lexington when he was in family practice with his father, Dr. John Quincy Cope, before World War II and since he returned to that community in 1950 to perform surgery at the newly constructed hospital. Dr. Cope studied at Washington University in St. Louis where he graduated in June, 1933 with cum laude honors that allowed him to become a member of Alpha Omega Alpha. He received the First Lieutenant rank in the U.S. Reserve Army upon graduation. In 1942, he was called to active duty as an Army Captain and served at Ft. Riley, was transferred to a POW camp as Chief Medical Officer with the 250th Station and then was promoted to Chief Surgeon and the rank of Lieutenant Colonel and was placed in charge of a German hospital that was caring for American troops until 1946 when he returned home. Dr. Cope has been chief of surgery at Lexington Memorial Hospital since 1952. He served as a vice-president of the MSMA in 1980.

Dr. B. F. Byland, Maryville physician and surgeon, has retired after 50 years in practice in Nodaway County. Except for four years as an Army physician in World War II, Dr. Byland has practiced for 50 years in the Maryville area. He is a graduate of Washington University School of Medicine in St. Louis and a native of Carrollton, Ill. A former Nodaway County coroner, Dr. Byland plans to use his retirement time to continue working with his horses and cattle at his farm south of Maryville. His horses have won many awards during the years and he is an honorary member of the American Quarterhorse Association's board of directors.

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To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in MISSOURI MEDICINE as they are received from the AMA.

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Rolf J. Krojanker, St. Louis
Roland P. Ladenson, Columbia
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J. Alexander Marchosky, St. Louis
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Joseph C. Williams, Kansas City
Eugene G. Wolanski, St. Joseph

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 367-2131
***Contact:* Ronald G. Evens, M.D., Director**

(1983)

Jan. 10	City-Wide Radiology Conference (St. Louis University)
Feb. 14	City-Wide Radiology Conference — CT Experience from an English Cancer Center
Mar. 14	City-Wide Radiology Conference — New Approaches to Measuring Cardiac Function in Nuclear Radiology
Apr. 11	Leroy Sante Lecture (St. Louis University)
May 9	City-Wide Radiology Conference — Pediatric Radiology
May 6-14	Fifth Annual Current Concepts in Musculoskeletal Radiology and Orthopedics (With Inter-American Congress of Radiology) (Acapulco)

The Ed Bixby Institute Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4306
***Contact:* Jane L. Jackson, Director of Seminars**

(1983)

Feb. 2	Infectious Diseases and Antibiotics
Apr. 6	Acute and Chronic Pain Management
June 1	Pulmonary Disease: Critical Care
Aug. 3	New Radiology Techniques

Washington University
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 454-3873
***Contact:* Loretta Giacoletto, Office of CME**

(1983)

Jan. 9-14	Practical Management of Patients With Infectious Diseases (Keystone, Colo.)
Feb. 5-11	1983 Care of the Aging Patient (Cancun, Mexico)

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

(1983)

Jan. 15-22	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 11-12	The Long Weekend: Update in Infectious Disease, Orthopedics and Pharmacology (Crown Center Hotel)
Feb. 12-19	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Ixtapa, Mexico)
March 10-12	Perspectives in Medical Care (Hyatt Regency Hotel)
March 19-26	Traveling Medical Education Course — Kansas City Southwest Clinical Society (Snowmass, Colo.)
April 21-23	Update in Obstetrics and Gynecology (Hyatt Regency Hotel)
May 12-13	Surgical Problems — The Old and the New (Alameda Plaza Hotel)
May 20-21	The Long Weekend (Alameda Plaza Hotel)
June 4	Physical Fitness (Crown Center Hotel)

American College of Physicians
4200 Pine St., Philadelphia, PA 19104
(215) 243-1200
***Contact:* Jane A. Ayers**

(1983)

Feb. 25-26	Regional CME Meetings (Alameda Plaza Hotel, Kansas City)

Mercy-Baptist Eye Foundation
615 S. New Ballas Rd., St. Louis 63141
(314) 432-5478
***Contact:* Mrs. Judi Kramer, Coordinator**

(1983)

May 15	16th Eye Seminar — Laser Surgery for Cataract, Glaucoma and Retina

(Continued on page 825)

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(Continued from page 824)

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Contact: Erich W. Pollak, M.D., Director of Surgical Education, for the following:

4:00 PM — Basic Sciences to Surgery Seminar
(Monday through Friday)

3:00 PM — Surgical Rounds
(Every Wednesday and Friday)

4:00 PM — Surgical Techniques Seminar
(Every second and fourth Wednesday)

4:45 PM — Morbidity and Mortality Conference
(Every fourth Wednesday)

8:00 AM — Morbidity and Mortality Conference
(Every second Saturday)

7:00 AM — Surgical Grand Rounds
(First and third Thursdays)

Contact: David S. Sneid, M.D., Director of Medical Education, for the following:

9:00 AM — Medicine Staff Conference
(First, third and fourth Tuesdays)

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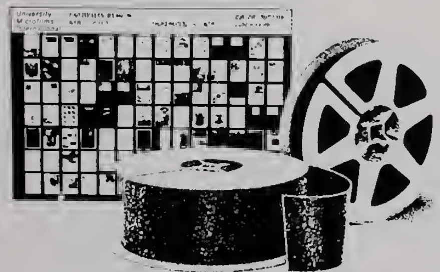

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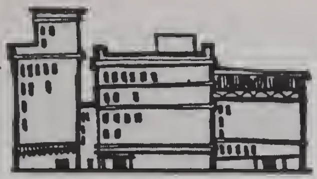

NEWS
From the Medical Schools

UNIVERSITY OF MISSOURI-COLUMBIA

The National Endowment for the Humanities has awarded a $10,000 grant to the University of Missouri-Columbia (UMC) School of Medicine to finance an international Philosophy and Medicine Symposium on reproductive rights and responsibilities.

Additional grants of $5,000 and $1,000 have been donated by the Education and Research Foundation of the American Medical Association and the Ortho Pharmaceutical Corporation, respectively.

The symposium, "Reproductive Rights and Responsibilities: Medicine and the New Biology," to be held on April 21-23, 1983 on the UMC campus is expected to draw an international audience of scholars.

"We believe that this symposium, given the internationally recognized speakers we have secured, will indeed define a new 'state-of-the-art' in a socially important area where many disciplines, most generally medicine and humanities, meet," said *Dr. William B. Bondeson*, professor of philosophy and medicine, who also is codirector of the medical school's program in health care and human values.

The symposium is the 16th in an international series of transdisciplinary symposia on philosophy and medicine. Among the issues on the agenda are the ethical dimensions of contraception, artificial insemination, and genetic screening and counseling. It is sponsored by the program in health and human values with the UMC Department of Philosophy in the College of Arts and Science.

The symptoms and diagnosis of sleep disorders were discussed at a conference on December 1 at the Missouri Institute of Psychiatry (MIP) in St. Louis.

The program featured *Dr. James K. Walsh*, director of the Sleep Disorders Center at Deaconess Hospital of St. Louis. Dr. Walsh, a certified clinical polysomnographer, is associate clinical professor of psychiatry, pediatrics and adolescent medicine, and neurology at the St. Louis University School of Medicine.

He discussed sleep physiology, the functions of a sleep disorders center, the diagnosis of insomnia and the use of hypnotics in treating sleep disorders. The university of Missouri-Columbia School of Medicine operates the MIP.

Dr. William B. Bondeson, professor of philosophy and medicine and codirector of the Program in Health Care and Human Values recently presented a paper at the 14th Trans-Disciplinary Symposium on Philosophy and Medicine held in Tel-Aviv, Israel. Dr. Bondeson's paper was titled "Research on Human Subjects, Privacy and Moral Injury."

Dr. G. Derwood Carnes, professor of psychiatry, recently presented a paper at the annual meeting of the American Psychological Association. Dr. Carnes's paper was titled "Scientific, Professional and Community-related Contributions of Veterans Administration Psychologists." Dr. Carnes also participated as a faculty member in a six-hour workshop on disabled professionals, students and trainees. The conference was held in New York City.

Dr. Carnes also has been elected to fellowship in the American Psychological Association in recognition of his outstanding contributions as a psychologist. Author of "Rehabilitation Service Providers and Programs in Western Europe: A Comparative Study," he is well-known for his work in rehabilitation. In addition to the book, he has written a monograph and numerous articles on rehabilitation.

Ruth Brent, assistant professor of housing and interior design at the UMC College of Home Economics, has completed a slide-tape program titled "Nursing Home Environments" for the Family and Community Medicine Department. The self-instruction program, which will be used primarily for instructing medical students, was funded by a grant from the U.S. Department of Health and Human Services.

Dr. Robert W. Gaines, professor of orthopaedic surgery, recently presented two papers at the Scoliosis Research Society meeting in Denver. The papers were titled "Experimental Evaluation of Harrington Rod Fixation Supplemented

With Sublaminar Wires in Stabilizing Thoracolumbar Fracture Dislocations" and "Stabilization of Thoracic and Thoracolumbar Fracture Dislocations With Harrington Rods and Sublaminar Wires."

Dr. Syed Arshad Husain and *Dr. John F. Simonds* recently attended the tenth annual congress of the International Association for Child and Adolescent Psychiatry and Allied Professions in Dublin, Ireland.

Dr. Husain, associate professor of psychiatry, presented a paper entitled "One Hundred Sexually Abused Girls: A Descriptive Analysis of the Data."

Dr. Simonds, professor of psychiatry, presented a paper entitled "Differences in Temperament of Nursery School Children Related to Socioeconomic Status of Families."

Dr. Kristi S. Roberts, assistant professor of psychiatry, presented a paper at the 33rd annual meeting of the Alcohol and Drug Problems Association of North America in Washington, D.C. Her paper was entitled, "Intervention Through Undergraduate Medical Education: Reaching the Primary Care Physician."

UNIVERSITY OF MISSOURI-KANSAS CITY

Lan Xi-Ch'un, M.D., president of the Shanghai Second Medical College in the People's Republic of China, and *Huang MinXin,* M.D., director of the Shanghai Third People's Hospital, received honorary professorships at School of Medicine on November 16 from *Dean Harry S. Jonas.*

Accompanied by *Xu Jia Yu,* M.D., deputy chief of the Department of Internal Medicine at Jui Chin Hospital in Shanghai, the Chinese physicians spent several days in November visiting the school and meeting with faculty. The visit is a continuation of the 1980 sister-school agreement between the Shanghai Second Medical College and the UMKC School of Medicine. *Dr. E. Grey Dimond,* consultant to the chancellor, signed that agreement and was named honorary professor of the faculty at Shanghai.

The Adolescent Pregnancy Program at Truman Medical Center, the primary adult teaching hospital for the School of Medicine, recently was awarded a $30,000 grant from the March of Dimes Foundation, metropolitan Kansas City chapter. The grant represents a 29% increase over last year in funding by the March of Dimes.

F. Jerry Volenec, Ph.D., professor of medicine and biology and director of the surgical oncology research laboratory, recently received $5,000 for cancer research from the Missouri State Aerie Fraternal Order of Eagles.

Marjorie S. Sirridge, M.D., professor and docent, was chairman of a clinical session of the annual symposium of the Leukemia Society of America. Dr. Sirridge, who is head of the Division of Hematology and Oncology, headed a session on the treatment and therapy of leukemia and allied diseases, including the application of monoclonal antibodies to autologous bone marrow transplantation.

Dr. Bjorn Bergdahl, docent at the University of Linkoping in Sweden, visited the School of Medicine for one week in November to study the six-year medical program. Dr. Bergdahl talked to several faculty and staff members to discuss School of Medicine's docent team concept and the processes of selection and evaluation of students. He also went on rounds with docent teams to gather information to use in the development of a Regional Health University in Linkoping and the surrounding county.

WASHINGTON UNIVERSITY

Dr. Hugh R. Waters, a practicing internist and instructor of clinical medicine at Washington University School of Medicine, received a Special Recognition Award from the American Society of Internal Medicine at its recent annual meeting in Washington. Dr. Waters was cited for his long service with the Missouri Society of Internal Medicine (MSIM).

Dr. Waters has been an assistant attending physician since 1953 at Barnes Hospital and is on the staff of St. Luke's Hospital. He is a past-president of MSIM, and is a member of a number of other professional organizations. Dr. Waters received his medical degree from Washington University in 1945. His internship was at Presbyterian Hospital in Chicago.

"Every man who rises above the common level has received two educations: the first from his teachers; the second, more personal and important, from himself." — Edward Gibbon Memoirs, 1975.

New Members

Frank J. Aberger, M.D., 3302 McIntosh Circle, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Aberger is a native of New York, N.Y., received his preliminary education at Indiana University and his M.D. degree at Indiana University in 1977. He specializes in gastroenterology and internal medicine.

Melquiadito Allego, M.D., Lucy Lee Hospital, Poplar Bluff 63901, has become a member of Butler-Wayne-Ripley-Carter County Medical Society. Dr. Allego is a native of the Philippines, received his preliminary education at Southwestern University and his M.D. degree at Southwestern University in 1968. He specializes in nuclear medicine and diagnostic radiology.

Robert A. Ballin, M.D., 733 N. Main (rear), Sikeston 63108, has become a member of SEMO County Medical Society. Dr. Ballin is a native of Stockholm, Sweden, received his preliminary education at the University of Heidelberg and his M.D. degree at Karolinska Institute in 1965. He specializes in anesthesiology.

Robert J. Biber, M.D., 1515 W. Truman Rd., Suite 404, Independence 64050, has become a member of Jackson County Medical Society. Dr. Biber is a native of the Panama Canal Zone, received his preliminary education at the University of Colorado and his M.D. degree at the University of Colorado in 1977. He specializes in urology.

Joseph R. Byers, M.D., P.O. Box 68, Fordland 65752, has become a member of Webster County Medical Society. Dr. Byers is a native of Council Bluffs, Iowa, received his preliminary education at Loras College and his M.D degree at Creighton University in 1959. He specializes in family practice.

Stephen D. Christiansen, M.D., National Avenue Medical Building, Suite 2800, 1900 S. National, Springfield 65804, has become a member of Greene County Medical Society. Dr. Christiansen is a native of Elgin, Ill., received his preliminary education at the University of Mis-

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souri-Rolla and his M.D. degree at St. Louis University in 1977. He specializes in general surgery.

Donald E. DeWitt, M.D., 2900 Baltimore, Suite 400, Kansas City, 64108, has become a member of Jackson County Medical Society. Dr. DeWitt is a native of Chicago, Ill., received his preliminary education at Hope College and his M.D. degree at Wayne State University in 1954. He specializes in family practice.

Dian L. Doody, M.D., 3107 Mc Clellan, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Doody is a native of Columbia, received her preliminary education at Texas Technical University and her M.D. degree at the University of Texas in 1979. She specializes in pediatrics.

Patrick T. Doody, M.D., 2817 McClellan Blvd., Joplin 64108, has become a member of Jasper County Medical Society. Dr. Doody is a native of New Orleans, La., received his preliminary education at the University of Texas-Austin and his M.D. degree at the University of Texas-Southwestern in 1977. He specializes in internal medicine.

Darrell Eugene Genstler, M.D., 650 Baltimore Medical Bldg., 2900 Baltimore, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Genstler is a native of Moscow, Idaho, received his preliminary education at Walla Walla College and his M.D. degree at Loma Linda University in 1977. He specializes in ophthalmology.

James D. Gibson, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Gibson is a native of Wichita, Kan., received his preliminary education at Wichita State University and his M.D. degree at the University of Kansas in 1975. He specializes in general surgery.

Joseph M. Graham, M.D., 2817 McClellan, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Graham is a native of Fort Worth, Tex., received his preliminary education at Texas A&M University and his M.D. degree at Baylor College in 1975. He specializes in surgery and thoracic surgery.

Antonio J. Guzman, M.D., P.O. Box 668, Highway 114 W., Dexter 63841, has become a

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member of SEMO County Medical Society. Dr. Guzman is a native of the Philippines, received her preliminary education at Manila Central University and her M.D. degree at Manila Central University in 1962. She specializes in obstetrics and gynecology.

Alastair D. Haddow, M.D., 1900 S. National, Suite 2200, Springfield 65804, has become a member of Greene County Medical Society. Dr. Haddow is a native of Glasgow, Scotland, received his preliminary education at Glasgow University and his M.D. degree at Glasgow University in 1974. He specializes in infectious diseases.

John R. Leach, M.D., 1515 Hazel, Carthage 64836, has become a member of Jasper County Medical Society. Dr. Leach is a native of Unionville, received his preliminary education at Central Missouri State College and his M.D. degree at the University of Missouri-Columbia in 1965. He specializes in general surgery.

Janice Kay McGovney, M.D., P.O. Box 123, Smithville 64089, has become a member of Clay County Medical Association. Dr. McGovney is a native of Kansas City, received her preliminary education at the University of Missouri-Kansas City and her M.D. degree at the University of Missouri-Kansas City in 1977. She specializes in internal medicine.

Douglas M. McNeal, M.D., 3014 J. E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. McNeal is a native of Manhattan, Kan., received his preliminary education at Kansas State University and his M.D. degree at Kansas State University in 1973. He specializes in pediatrics.

Orville A. Mehaffy, M.D., 2817 McClelland Blvd., Suite 108, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Mehaffy is a native of Rock Island, Ill., received his preliminary education at Kansas State College of Pittsburg and his M.D. degree at Kansas University in 1969. He specializes in family practice.

Donald C. Nelson, M.D., 1900 S. National, Suite 2200, Springfield 65804, has become a member of Greene County Medical Society. Dr. Nelson is a native of St. Louis, recieved his preliminary education at the University of Missour-Columbia and his M.D. degee at St. Louis Uni-

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versity in 1977. He specializes in internal medicine.

Jackie R. Norris, M.D., 5303 Persimmon Trail, Apt. #14, Kansas City 64129, has become a member of Jackson County Medical Society. Dr. Norris is a native of Jones, La., received his preliminary education at Grambling State University and his M.D. degree at Creighton University in 1981. He specializes in internal medicine.

John L. Rhodes, M.D., Highway 61 North, Sikeston 63801, has become a member of SEMO Medical Society. Dr. Rhodes is a native of Lafayette, Ind., received his preliminary education at Pennsylvania State University and his M.D. degree at the University of Virginia in 1963. He specializes in radiology.

William E. Rice, D.O., 400 N. Main, Monroe City 63456, has become a member of Marion-Ralls-Shelby Counties Medical Society. Dr. Rice is a native of Wellsville, received his preliminary education at Northeast Missouri State University and his D.O. degree at Kirksville College of Osteopathic Medicine in 1968. He is in general practice.

Cecil Byron Smith, III, M.D., Suite 409, 4620 J. C. Nichols Parkway, Plaza Parkway Bldg., Kansas City 64112, has become a member of Jackson County Medical Society. Dr. Smith is a native of Little Rock, Ark., received his preliminary education at Hendrix College and his M.D. degree at the University of Arkansas in 1974. He specializes in ophthalmology.

Danny Charles Sparks, M.D., 9150 E. 41st Terr., Kansas City 64133, has become a member of Jackson County Medical Society. Dr. Sparks is a native of Salem, Ore., received his preliminary education at Oregon State University and his M.D. degree at the University of Oregon in 1973. He specializes in pediatrics.

Gregory E. Steiner, M.D., 210 Main, La Grange 63448, has become a member of Marion-Ralls-Shelby Counties Medical Society. Dr. Steiner is a native of La Grange, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1974. He specializes in family practice.

Dan L. Wiesemeyer, M.D., 609 Cherry, Suite 229, Springfield 65806, has become a member of Greene County Medical Society. Dr. Wiesemeyer is a native of Highland, Ill., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1979. He specializes in anesthesiology.

Timothy Allen Wilson, M.D., P.O. Box 123, Smithville 64089, has become a member of Clay County Medical Association. Dr. Wilson is a native of Chicago, Ill., received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri-Kansas City in 1976. He specializes in family practice.

New Student Members

University of Missouri-Columbia

John D. Becker
Warren M. Breite
Patricia M. Durkin
James C. Elmer
Dee E. Fenner
Julie M. Fischer
Glennon J. Fox
Scott H. Goldberg
Jan E. Henstorf
Melissa M. Hicks
George R. Hoerr
Lance D. Holemon
Alex John
Linda M. Klutho
Scott M. Lloyd
Amy A. Mosher
Jonathan R. Rigden
Philip K. Robb
Richard A. Saladino
Elaine C. Siegfried
Thomas N. Spagnolia
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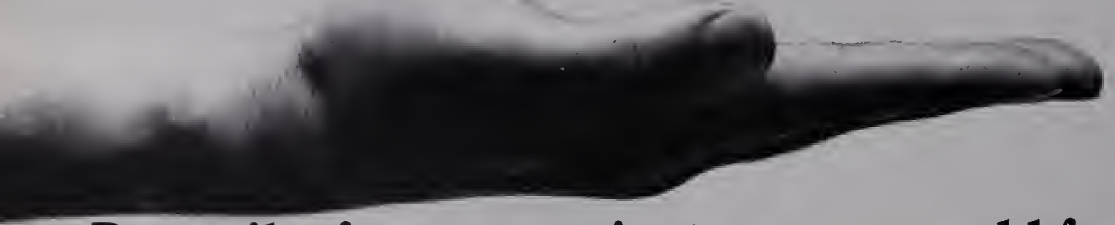

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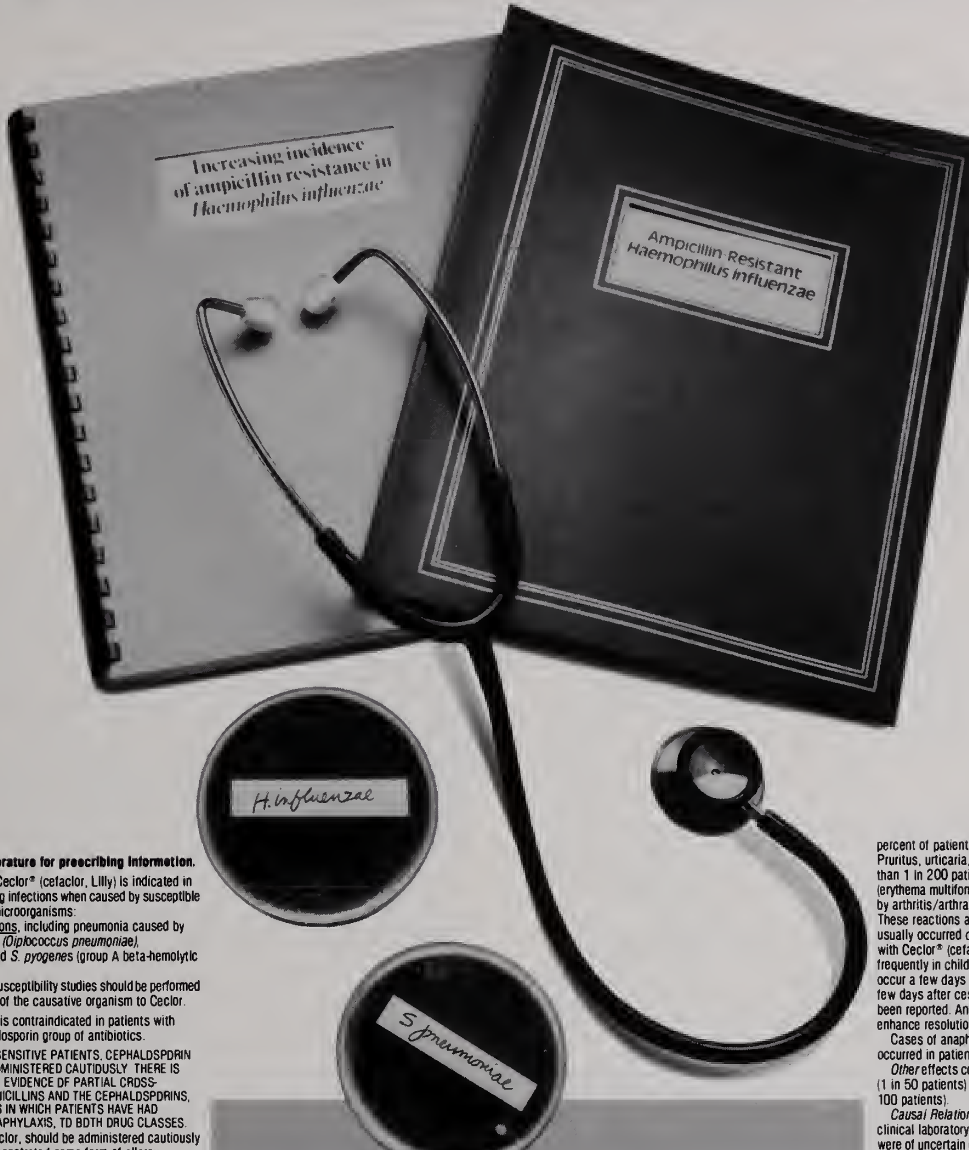

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Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae* [8]

Note. Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

CONCERN ABOUT medical costs is increasing among physicians and the general public alike, according to an AMA survey. In 1,000 telephone interviews with randomly selected physicians, 58% said they considered cost to be the main problem facing medicine today. Last year, by comparison, 44% rated cost as the main problem. "This is an important finding for all cost-containment programs because a widespread understanding of the problem among physicians is definitely a necessary condition for success," the survey said. In telephone interviews with randomly selected public respondents, 62% said the main problem facing health care and medicine is cost. Last year, 55% said cost was the main problem. Nearly half (47%) of the American people believe that not enough of society's resources are being directed to health care, the survey found. Very few (16%) feel that too much is being spent. Health care, however, is not the public's highest priority when it comes to spending more money. Public respondents gave a higher ranking to education, the environment, and financial assistance to the poor.

CARE OF TERMINALLY ill patients with severe chronic pain will be discussed at a conference sponsored by the AMA and the Public Health Service on January 28 in Washington, D.C. Some legislators have been advocating a return to the use of heroin for end-stage patients. The objective of the conference is to foster the use of currently approved drugs to alleviate the suffering of these patients. Participants will be urged to disseminate information on the existing pharmacological armamentarium to the medical community. Attendance will be limited. For further information, write to William T. McGivney, Ph.D., Division of Drugs, AMA Headquarters, or call (312) 751-6487.

THE AMA'S NINTH Annual State Health Legislation Meeting will be on January 5-8, 1983 at the Greenleaf Golf and Tennis Resort, Orlando, Fla. The meeting is designed for state association and national specialty society officers, executive staff, government relations staff, legal counsel and Auxiliary leadership. A mock legislative hearing will offer tips on improving techniques for testifying before state legislatures. For more information, contact AMA Dept. of State Legislation, AMA Headquarters.

THE AMA HAS LAUNCHED its Patient Medication Instruction Program. Describing it as one of the most important programs the Association has ever initiated, AMA Executive Vice-President James H. Sammons, M.D., said the use of PMIs is expected to improve the effectiveness of drug therapy, strengthen the physician-patient relationship, reduce the risk of improper drug use, decrease the incidence of preventable and serious adverse drug reactions and increase patient compliance. The PMI program is sponsored by the AMA Education and Research Foundation. The PMIs are 5½-inch by 8½-inch sheets printed on both sides with simple instructions on the purpose of the drug, how it is to be taken and its possible side effects. Space is provided to write the dosage and any special instructions the physicians may have for the individual patient. Bound in pads of 100 sheets, PMIs are available now for 20 of the most widely prescribed drugs or drug classes at a nominal charge to defray the cost of postage and handling. The minimum order is 10 pads for $5, prepaid to AMA, P.O. Box 52, Rolling Meadows, IL 60008.

A TWICE MONTHLY socioeconomic report on half-hour cassettes is now available to physicians. *Audio Medical News,* coproduced by the AMA and Audio-Digest Foundation, covers such subjects as health legislation, medicolegal problems, cost containment, health insurance and government affairs. The medical news will include live-recorded interviews and reports from financial institutions and universities. Annual subscription is $96, with AMA members and Audio-Digest subscribers receiving an extra month's program free. To receive a free program for preview, call toll free 1-800-423-2308 (in California 1-800-232-2165).

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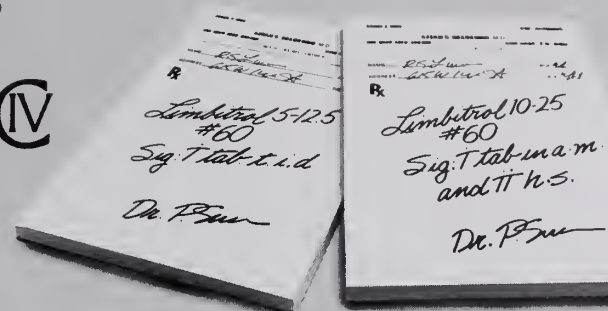

In anxious depression,

SPECIFIC FOR THE NONPSYCHOTIC PATIENT

Fits the picture of anxiety/depression correlation

Most patients with a mood disorder have a mixture of anxiety and depression. One clinician[1] found a correlation of 0.7 in anxiety and depression scores; another[2] has estimated that 7 of 10 nonpsychotic depressed patients are also anxious. For the dual symptomatology of anxious depression, Limbitrol provides dual medication.

More appropriate for the nonpsychotic depressed and anxious patient

Limbitrol contains both amitriptyline, specific for symptoms of depression, and a benzodiazepine, specific for the symptoms of anxiety. Thus it is a better choice than other dual agents for anxious depression that contain a phenothiazine, a class of antipsychotic drugs less specific for anxiety and now generally avoided in nonpsychotic patients.[2,3]

Avoids the risk of tardive dyskinesia carried by the phenothiazine combinations

The causal relationship between the phenothiazines and other extrapyramidal side effects, including tardive dyskinesia, is well established. In contrast, the reported incidence of these adverse reactions with Limbitrol or either of its components is rare.

References: 1. Clagham J: *Psychosomatics 11*:438-441, Sept-Oct 1970. **2.** Rickels K: Drug treatment of anxiety, in *Psychopharmacology in the Practice of Medicine*, edited by Jarvik ME. New York, Appleton-Century-Crofts, 1977, p. 316. **3.** Baldessarini RJ, Tarsy D: Tardive dyskinesia, in *Psychopharmacology: A Generation of Progress*, edited by Lipton MA, DiMascio A, Killam KF. New York, Raven Press, 1978, p. 999

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 50.

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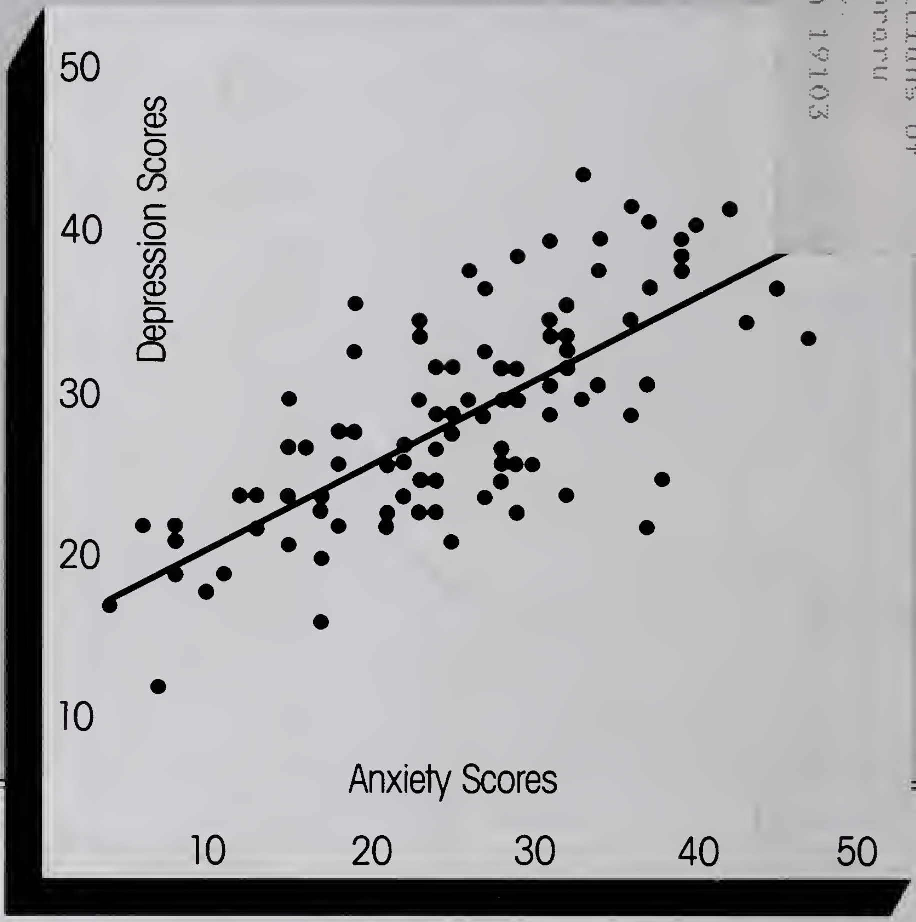
MORE DEPRESSION MEANS MORE ANXIETY...



The graph illustrates the close correlation between depression and anxiety derived through the MMPI and the Taylor Manifest Anxiety Scale in 100 nonpsychotic psychiatric patients. The Coefficient of Correlation is 0.7. As depression increased, so did the anxiety levels.

—Adapted from Claghorn J[1]

A key reason why

MORE PHYSICIANS ARE CHOOSING LIMBITROL®

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[1] Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970

Please see summary of product information on inside cover.

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